09/880,727

FILE 'HOME' ENTERED AT 07:02:33 ON 25 SEP 2002

=> file reg
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 07:02:44 ON 25 SEP 2002
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STRUCTURE FILE UPDATES: 23 SEP 2002 HIGHEST RN 454421-17-1
DICTIONARY FILE UPDATES: 23 SEP 2002 HIGHEST RN 454421-17-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

*** YOU HAVE NEW MAIL ***

=>
Uploading 09880727.str

L1 STRUCTURE UPLOADED

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u
SEARCH ENDED BY USER

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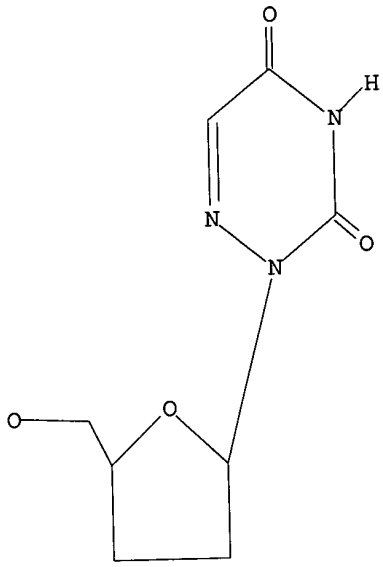
L1 STR



Structure attributes must be viewed using STN Express query preparation.

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FULL SEARCH INITIATED 07:03:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2487 TO ITERATE

100.0% PROCESSED 2487 ITERATIONS 535 ANSWERS
SEARCH TIME: 00.00.01

L2 535 SEA SSS FUL L1

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COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	140.28	140.49

FILE 'CAPLUS' ENTERED AT 07:03:37 ON 25 SEP 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 25 Sep 2002 VOL 137 ISS 13
FILE LAST UPDATED: 23 Sep 2002 (20020923/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For

information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

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L3          703 L2

=> s l3 and label
         48825 LABEL
L4           3 L3 AND LABEL

=> s l3 and label?
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L5          36 L3 AND LABEL?

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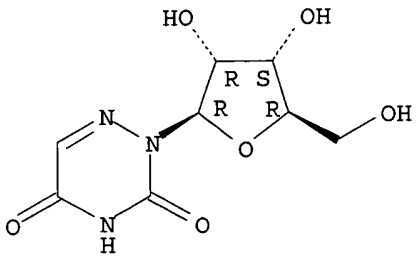
L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1981:186601 CAPLUS
DN 94:186601
TI DNA repair in pollen: range of mutagens inducing repair, effect of replication inhibitors and changes in thymidine nucleotide metabolism during repair
AU Jackson, J. F.; Linskens, H. F.
CS Waite Agric. Res. Inst., Univ. Adelaide, Glen Osmond, 5064, Australia
SO MGG, Mol. Gen. Genet. (1980), 180(3), 517-22
CODEN: MGGEAE; ISSN: 0026-8925
DT Journal
LA English
AB Pollen of Petunia hybrida carry out DNA repair during the 1st 2 h of germination when certain mutagens are included in the germination medium. This repair, detected as unscheduled DNA synthesis, since there is no replicative DNA synthesis in Petunia pollen, can be induced by the chem. mutagens, N-methyl-N'-nitro-N-nitrosoguanidine [70-25-7], 4-nitroquinoline 1-oxide [56-57-5], azaserine [115-02-6], and methyl methanesulfonate [66-27-3]. These compds. are all capable of direct covalent interaction with DNA. Mutagens requiring metabolic activation before interaction with DNA did not induce DNA repair synthesis in pollen. The practice of solubilizing water-insol. chem. mutagens with DMSO [67-68-5] did not prove practical, due to the extremely harmful effects of DMSO on pollen. Pretreatment of pollen before germination with pure Et2O [60-29-7], however, had no harmful effect on either repair or pollen germination. Therefore, water-insol., Et2O-sol. mutagens were tested by pretreatment of the pollen with mutagens in Et2O soln. By this means, the direct-acting mutagen, Et2SO4 [64-67-5], also brings about unscheduled DNA synthesis in pollen, while 2-acetylaminofluorene [53-96-3] and dimethyl-p-aminobenzene [60-11-7], both requiring metabolic activation, did not do so. Inhibitors of DNA replicative synthesis, hydroxyurea [127-07-1], azaserine, azauridine [**54-25-1**], and fluorodeoxyuridine [50-91-9] did not inhibit unscheduled DNA synthesis brought about by N-methyl-N'-nitro-N-nitrosoguanidine. On the contrary, these compds. stimulated repair synthesis to varying degrees, hydroxyurea having the greatest effect. Pollen uptake of 3H-labeled thymidine [50-89-5] and the amt. of radioactive **label** subsequently appearing in dTMP and dTDP + dTTP was increased by 4-nitroquinoline 1-oxide. Partial inhibition of these increases and of 4-nitroquinoline 1-oxide induced repair synthesis by cAMP [60-92-4] suggested that thymidine:AMP phosphotransferase [60440-28-0] rather than thymidine kinase was responsible for thymidine phosphorylation in pollen. Enzyme assays on pollen exts. confirmed this.
IT **54-25-1**
RL: BIOL (Biological study)
(DNA repair by Petunia hybrida pollen response to)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA

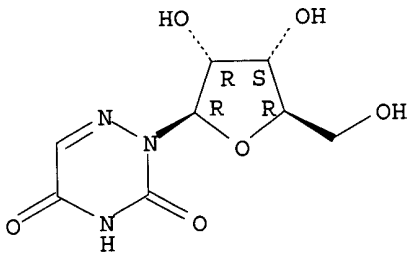
INDEX NAME)

Absolute stereochemistry.



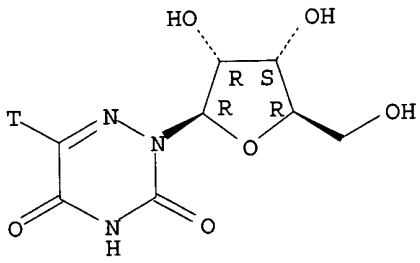
L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1980:3705 CAPLUS
DN 92:3705
TI Simultaneous estimation of rates of pyrimidine and purine nucleotide synthesis de novo in cultured human cells
AU Huisman, William H.; Raivio, Kari O.; Becker, Michael A.
CS Rheumatol. Sect., VA Hosp., San Diego, CA, 92161, USA
SO J. Biol. Chem. (1979), 254(24), 12595-602
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
AB The requirement of the pathways of pyrimidine and purine nucleotide synthesis de novo for CO2 was exploited in a method for simultaneous estn. of the rates of operation of these pathways in cultured human lymphoblasts and fibroblasts. Rates of incorporation of H14CO3- into pyrimidine and purine compds. were const. for .ltoreq.2 h and were proportional to the cell no. in the assay. Incorporation rates appeared to reflect the rates of synthesis of pyrimidine and purine compds. in individual cell strains under conditions in which: (1) carbamyl phosphate concns. were <0.5% of the hourly flux of H14CO3- into the pyrimidine pathway; and (2) the sp. activities of HCO3- pools were apparently unchanged. Alterations in the rates of H14CO3- incorporation during incubation of normal and hypoxanthine-guanine phosphoribosyltransferase-deficient lymphoblasts with purine bases and purine and pyrimidine nucleosides were in agreement with previous observations using alternative methods for the individual estn. of rates of purine or pyrimidine synthesis. In addn., comparable increases in H14CO3- incorporation into purines and pyrimidines were demonstrated in human lymphocytes during exposure to phytohemagglutinin, a stimulus previously shown to accelerate rates of pyrimidine and purine synthesis. These findings provided evidence for the validity of the present method in assessing the rates of pyrimidine and purine synthesis. High correlations between log phase growth rates of individual lymphoblast lines and their rates of incorporation of **label** were obsd. Although specific and consistent differences were obsd. in the rates of H14CO3- incorporation into pyrimidine and purine compds. in normal, hypoxanthine-guanine phosphoribosyltransferase-deficient, and 5-phosphoribosyl 1-pyrophosphate synthetase superactive strains, lack of information concerning the sp. activities of intracellular HCO3- pools in different cell strains restricted abs. comparisons of the rates of nucleotide synthesis between cell strains.
IT **54-25-1**
RL: BIOL (Biological study)
(purine and pyrimidine nucleotide formation from bicarbonate by fibroblast and lymphoblast in response to)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1974:491480 CAPLUS
DN 81:91480
TI Preparation of 6-azauracil-5-t and 6-azauridine-5-t of high molar activity
AU Filip, Jiri; Skoda, Jan; Hradec, Hynek
CS Inst. Res. Prod. Uses Radioisot. , Czech. Acad. Sci. , Prague, Czech.
SO J. Label. Compounds (1974), 10(1), 59-71
CODEN: JLCAAI
DT Journal
LA English
AB Catalytic reductive dehalogenation of 5-bromo-6-azauracil with carrier-free T gave 6-azauracil-5-3H of a molar activity of 19.0Ci/mmole. The conditions for the catalytic reductive dehalo-genation were examd. in tracer expts. Microbial transformation gave 6-azauridine-5-3H from 6-azauracil-5-3H having molar activity of 18.8 Ci/mmole. The stability of T was investigated in aq. medium at 100.degree.C.
IT **53615-16-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and **label** stability of)
RN 53615-16-0 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione-6-t, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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L6 ANSWER 1 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 2001:851808 CAPLUS
DN 135:367666
TI Nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays
IN McGall, Glenn; Barone, Anthony D.
PA USA

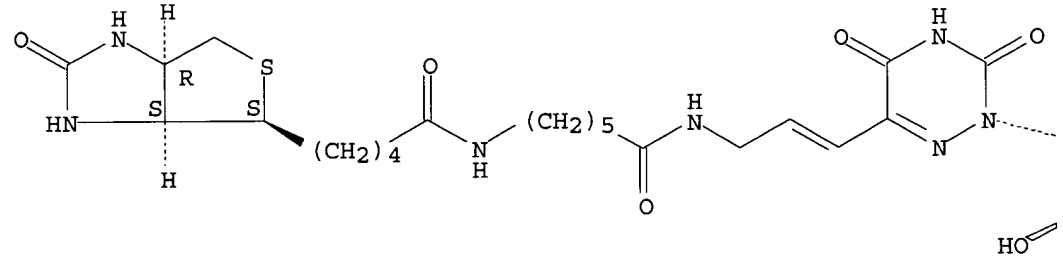
SO U.S. Pat. Appl. Publ., 47 pp., Cont.-in-part of U.S. Appl. 2001 18,514.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001044531	A1	20011122	US 2001-780574	20010209
	US 2001018514	A1	20010830	US 1998-126645	19980731
PRAI	US 1998-126645	A2	19980731		

OS MARPAT 135:367666
AB Nucleic acid **labeling** compds. contg. heterocyclic derivs. are disclosed. The heterocyclic deriv. contg. compds. are synthesized by condensing a heterocyclic deriv. with a cyclic group (e.g. a ribofuranose deriv.). The **labeling** compds. are suitable for enzymic attachment to a nucleic acid, either terminally or internally, to provide a mechanism of nucleic acid detection. Thus, a no. of biotin- or fluorescein purine- and pyrimidine-.beta.-D-ribofuranoside analogs were prepd. These analogs were successfully incorporated into hybridization probes (using terminal deoxynucleotidyltransferase) and utilized in single nucleotide polymorphism geno-typing using micro-chip arrays.
IT **257297-94-2P 257298-04-7P**
RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays)
RN 257297-94-2 CAPLUS
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-2-oxo-N-[6-oxo-6-[[3-[2,3,4,5-tetrahydro-2-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-ribofuranosyl]-3,5-dioxo-1,2,4-triazin-6-yl]-2-propenyl]amino]hexyl]-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



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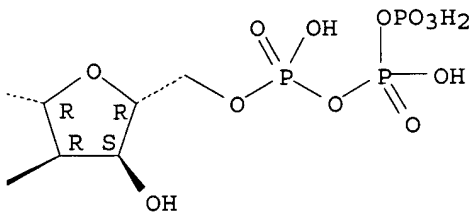
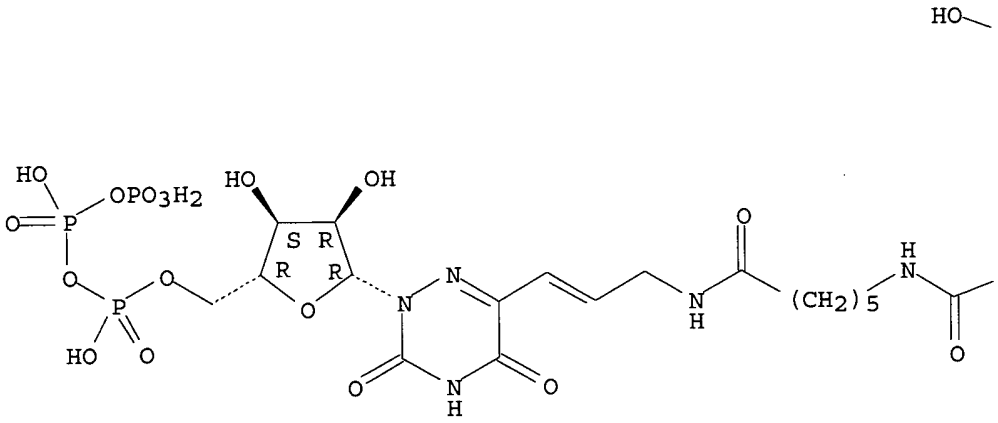


RN 257298-04-7 CAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide,

3',6'-dihydroxy-3-oxo-N-[6-oxo-6-[[3-[2,3,4,5-tetrahydro-2-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-ribofuranosyl]-3,5-dioxo-1,2,4-triazin-6-yl]-2-propenyl]amino]hexyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



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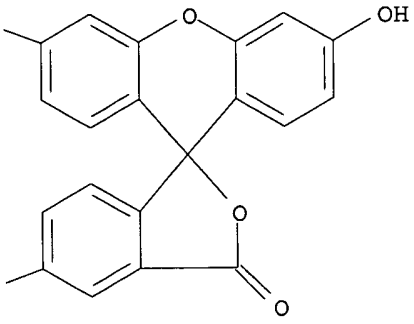
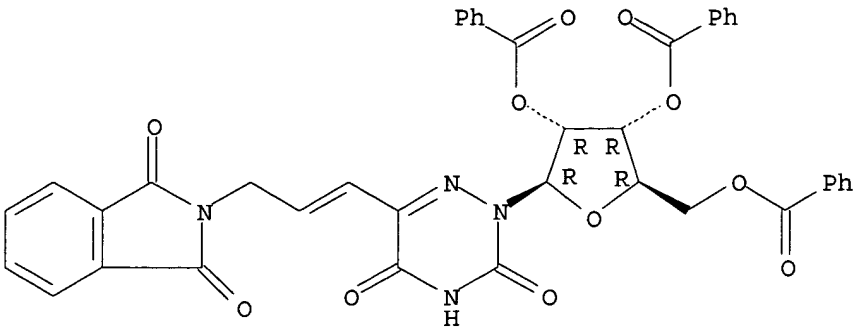


IT **257297-91-9P 257297-92-0P 257297-93-1P**
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays)

RN 257297-91-9 CAPLUS

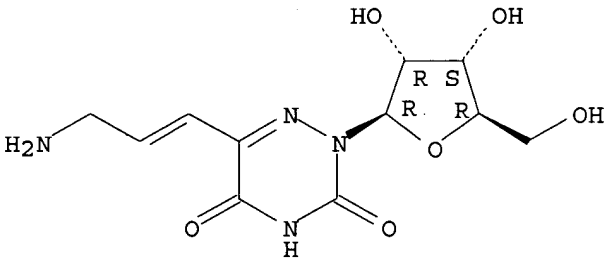
CN 1H-Isoindole-1,3(2H)-dione, 2-[3-[2,3,4,5-tetrahydro-3,5-dioxo-2-(2,3,5-tri-O-benzoyl-.beta.-D-ribofuranosyl)-1,2,4-triazin-6-yl]-2-propenyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



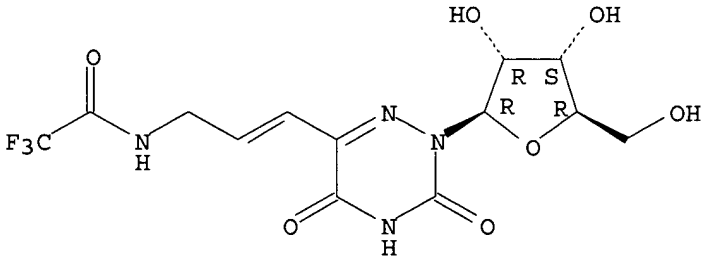
RN 257297-92-0 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 6-(3-amino-1-propenyl)-2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



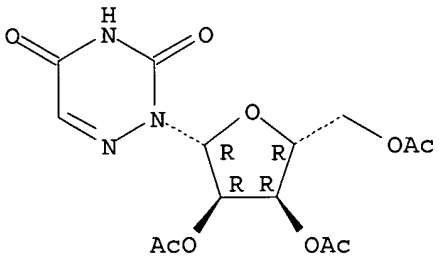
RN 257297-93-1 CAPLUS
CN Acetamide, 2,2,2-trifluoro-N-[3-(2,3,4,5-tetrahydro-3,5-dioxo-2-.beta.-D-ribofuranosyl-1,2,4-triazin-6-yl)-2-propenyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



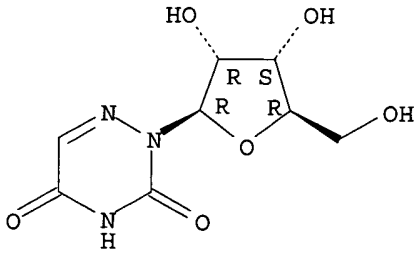
IT **2169-64-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays)
RN 2169-64-4 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 2 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 2000:758718 CAPLUS
DN 135:40384
TI Structure-inhibitory profiles of nucleosides for the human intestinal N1 and N2 Na+-nucleoside transporters
AU Patil, Shivakumar D.; Ngo, Leock Y.; Unadkat, Jashvant D.
CS H272 Health Sciences, Department of Pharmaceutics, University of Washington, Seattle, WA, 98195, USA
SO Cancer Chemotherapy and Pharmacology (2000), 46(5), 394-402
CODEN: CCPHDZ; ISSN: 0344-5704
PB Springer-Verlag
DT Journal
LA English
AB The structure-inhibitory profiles of nucleosides for the N1 and N2 Na+-nucleoside transporters of the human intestine were detd. The uptake of 3H-**labeled** prototypic substrates of the N1 (inosine) and N2 (thymidine) transporters into human intestinal brush border membrane vesicles was measured by a rapid filtration technique in the presence and absence of various uridine and adenosine analogs and antiviral and anticancer nucleoside drugs (100 and 1000 .mu.M). In the ribose ring, the 3'-oxygen is required for inhibition of uptake of nucleosides by both the N1 and N2 transporters. The structural requirements for such inhibition differ with respect to modifications on the 5' position of the sugar ring or on the base. The N2 transporter is more tolerant to these substitutions than is the N1 transporter. The 6 position on uracil and the 8 position on adenine are crit. for inhibition of uptake of nucleosides by both the N1 and N2 nucleoside transporters. These data are the 1st evidence that the binding site(s) of the human N1 and N2 transporters differ in their interaction with analogs of their common substrates, uridine and adenosine. Such studies can provide insight into the crit. structural determinants of the substrate necessary for recognition by the Na+-nucleoside transporters of the human intestine.
IT **54-25-1**, 6-Azauridine
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(structure-inhibitory profiles of nucleosides for human intestinal N1 and N2 Na+-nucleoside transporters)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 2000:98825 CAPLUS
DN 132:133201
TI Nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays
IN McGall, Glenn H.; Barone, Anthony D.
PA Affymetrix, Inc., USA
SO PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

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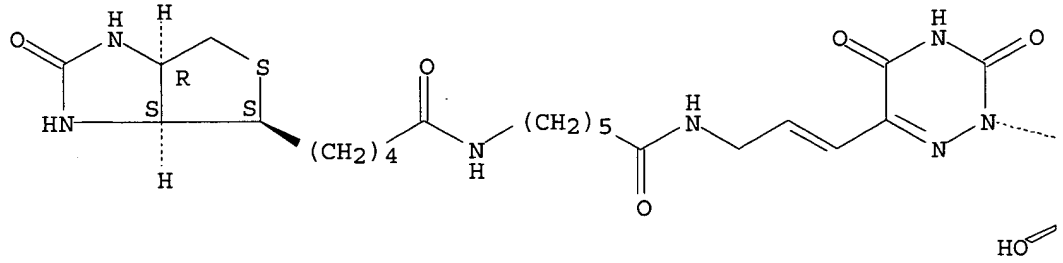
PRAI	US 1998-126645	A	19980731		
	WO 1999-US12390	W	19990720		

OS MARPAT 132:133201
AB Nucleic acid **labeling** compds. contg. heterocyclic derivs. are disclosed. The heterocyclic deriv. contg. compds. are synthesized by condensing a heterocyclic deriv. with a cyclic group (e.g. a ribofuranose deriv.). The **labeling** compds. are suitable for enzymic attachment to a nucleic acid, either terminally or internally, to provide a mechanism of nucleic acid detection. Thus, a no. of biotin- or fluorescein purine- and pyrimidine-.beta.-D-ribofuranoside analogs were prepd. These analogs were successfully incorporated into hybridization probes (using terminal deoxynucleotidyltransferase) and utilized in single nucleotide polymorphism genotyping using microchip arrays.
IT **257297-94-2P 257298-04-7P**
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays)
RN 257297-94-2 CAPLUS

CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-2-oxo-N-[6-oxo-6-[[3-[2,3,4,5-tetrahydro-2-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-ribofuranosyl]-3,5-dioxo-1,2,4-triazin-6-yl]-2-propenyl]amino]hexyl]-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



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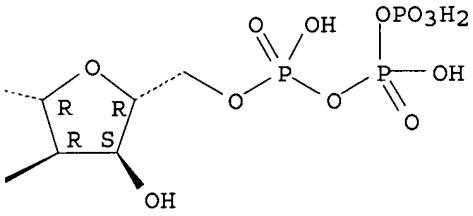
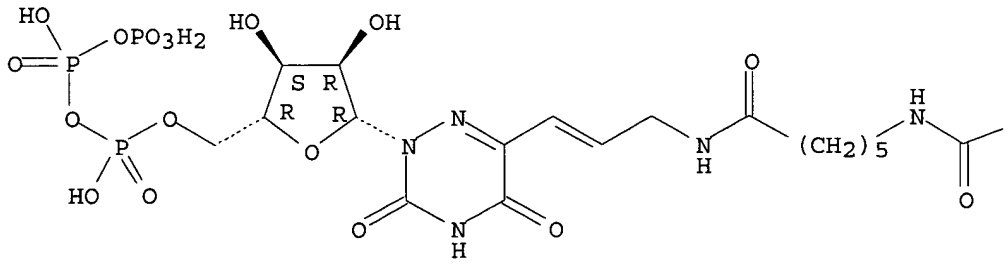
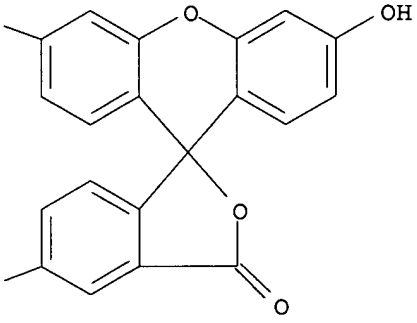


RN 257298-04-7 CAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, 3',6'-dihydroxy-3-oxo-N-[6-oxo-6-[[3-[2,3,4,5-tetrahydro-2-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-ribofuranosyl]-3,5-dioxo-1,2,4-triazin-6-yl]-2-propenyl]amino]hexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

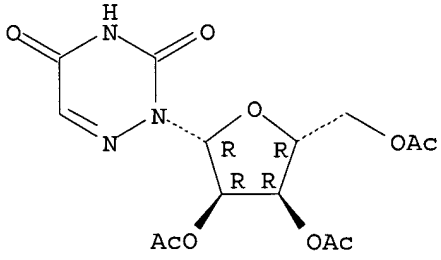
PAGE 1-A





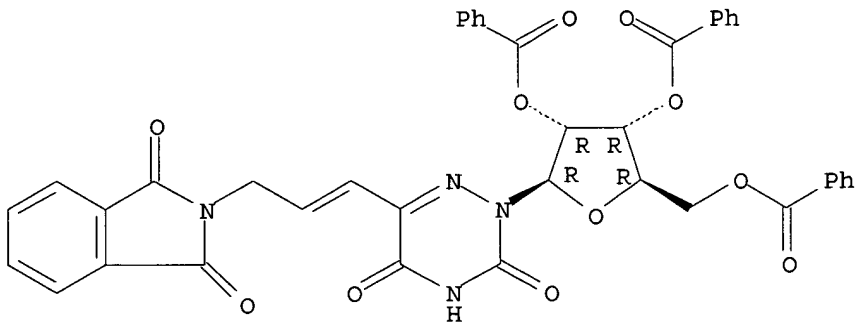
IT **2169-64-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays)
RN 2169-64-4 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



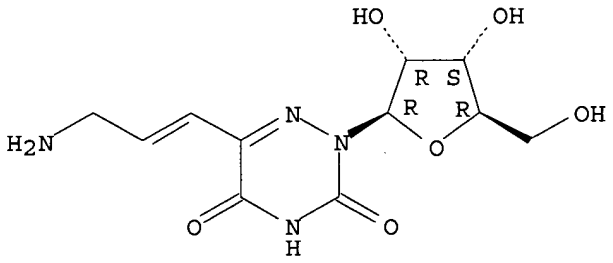
IT **257297-91-9P 257297-92-0P 257297-93-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays)
RN 257297-91-9 CAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[3-[2,3,4,5-tetrahydro-3,5-dioxo-2-(2,3,5-tri-O-benzoyl-.beta.-D-ribofuranosyl)-1,2,4-triazin-6-yl]-2-propenyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



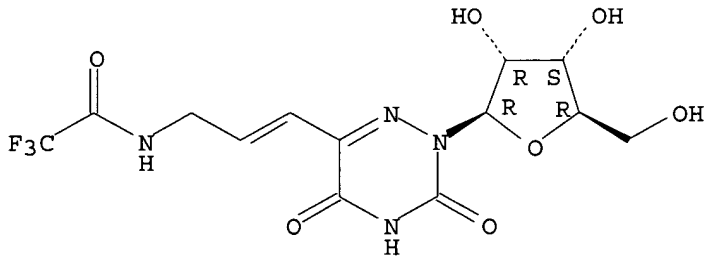
RN 257297-92-0 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 6-(3-amino-1-propenyl)-2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 257297-93-1 CAPLUS
CN Acetamide, 2,2,2-trifluoro-N-[3-(2,3,4,5-tetrahydro-3,5-dioxo-2-.beta.-D-ribofuranosyl-1,2,4-triazin-6-yl)-2-propenyl]- (9CI) (CA INDEX NAME)

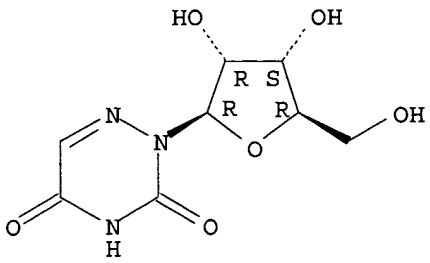
Absolute stereochemistry.
Double bond geometry unknown.



L6 ANSWER 4 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1998:759665 CAPLUS
DN 130:95775
TI Synthesis of tritium-**labeled** diazines and their analogs
AU Myasoedov, Nykolai F.; Sidorov, Georgy V.
CS Institute of Molecular Genetics, RAS, Moscow, 123182, Russia
SO Journal of Labelled Compounds & Radiopharmaceuticals (1998), 41(11), 993-1003
CODEN: JLCRD4; ISSN: 0362-4803
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB Some 40 diazines have been tritiated to high specific activities using a variety of **labeling** procedures such as catalytic hydrogen isotope exchange both in soln. and the solid state, redn. and hydration. For purine derivs. it is shown that the solid state catalytic isotope exchange reaction is the most effective method. With pyrimidines this reaction is accompanied by a parallel hydration reaction of the 5,6-double bond to form a complex mixt. of products. Identification and quant. estn. of these products has been accomplished in terms of the reaction condition (solvent, nature of catalyst). Key Words: tritium, catalytic hydrogenation, purines, pyrimidines, nucleosides, nucleotides, phytohormones, and terminators of DNA synthesis.
IT **219524-90-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using solid-state isotope exchange reaction)
RN 219524-90-0 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl-, labeled with tritium (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1994:331137 CAPLUS
DN 120:331137
TI Pharmaceutical liposomes comprising lipids derivatized with PEG for treatment of inflamed tissues
IN Woodle, Martin C.; Martin, Francis J.; Huang, Shi Kun
PA Liposome Technology, Inc., USA
SO PCT Int. Appl., 97 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 9

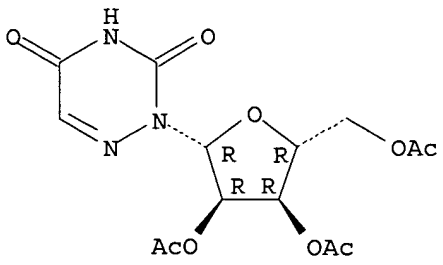
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9407466	A1	19940414	WO 1993-US9572	19931007
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5356633	A	19941018	US 1992-958100	19921007
	EP 662820	A1	19950719	EP 1993-923295	19931007
	EP 662820	B1	19970507		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
PRAI	US 1992-958100	A	19921007		
	US 1989-425224	A2	19891020		
	US 1991-642321	A2	19910115		
	WO 1993-US9572	W	19931007		

AB Pharmaceutical liposomes comprising vesicle-forming lipids derivatized with PEG for delivery to an inflamed region are disclosed. After i.v. administration, the liposomes are taken up by the inflamed region within 24-48 h, for site-specific release of the therapeutic compd. into the inflamed region. PEG conjugates with distearylphosphatidylethanolamine (prepn. given) was combined with partially hydrogenated egg phosphatidylcholine in a ratio of 0.1:2 and the lipid mixt. was hydrated and extruded through a 0.1 .mu.m polycarboante membrane to produce multilamellar vesicle with av. size .apprx.0.1.mu.m. Above liposomes were **labeled** and injected to mice and the concn. of liposomes in the blood was detd. 24 after injection. The amt. of dose remaining in the blood 24 h after injection was 5-40% as compared to <1% for liposomes lacking PEG-derivatized lipids. Extravasation of liposomes contg. PEG-derivatized lipids into sites of bradykinin-induced inflammation in rats was studied.

IT **2169-64-4**, Azaribine
RL: BIOL (Biological study)
(pharmaceutical liposomes comprising lipids derivatized with PEG and, for treatment of inflamed tissues)
RN 2169-64-4 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1994:280292 CAPLUS
DN 120:280292
TI Detection and therapy of lesions with biotin/avidin conjugates
IN Goldenberg, David M.
PA Immunomedics, Inc., USA
SO PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 14

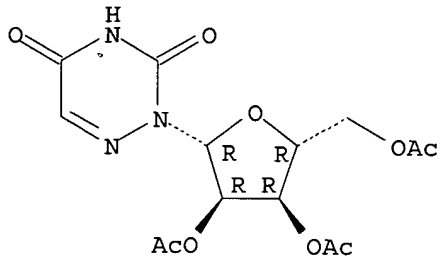
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9404702	A2	19940303	WO 1993-US7754	19930820
	WO 9404702	A3	19961003		
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5525338	A	19960611	US 1992-933982	19920821
	EP 656115	A1	19950607	EP 1993-920155	19930820
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	AU 671489	B2	19960829	AU 1993-50184	19930820
	JP 09505799	T2	19970610	JP 1993-506499	19930820
PRAI	US 1992-933982	A	19920821		
	WO 1993-US7754	W	19930820		

AB Lesions in a patient are targeted for detection or therapy by parenteral injection of (A) biotin or avidin conjugated to a protein which binds to a marker substance produced by or assocd. with the lesion; (B) optionally, a clearing compn. comprising avidin (after a biotin-protein conjugate) or biotin (after an avidin-protein conjugate) to clear compn. (A) from nontargeted sites; (C) a detection or therapeutic compn. comprising a conjugate of avidin or biotin, binding protein as in (A), and a detection or therapeutic agent; (D) optionally, a conjugate of avidin or biotin with a detection or therapeutic agent. The lesion may be cancerous, cardiovascular (e.g. thrombus, embolus, infarct, atherosclerotic plaque), infectious, or inflammatory. The binding protein may be a hormone, lymphokine, growth factor, enzyme, immunomodulator, receptor, (monoclonal) antibody (fragment), etc. The detection agent may be a radionuclide, MRI enhancing agent, photoactivated dye, etc. The therapeutic agent may be an isotope, drug, toxin, hormone, receptor antagonist, etc. Kits contg. sterile injectable compns. for use with embodiments of this method are described. Thus, a patient with a colon neoplasm was injected i.v. with a biotinylated monoclonal antibody to CEA. Two days later, unlabeled avidin was injected i.v., followed the next day by biotinylated antibody to colon-specific antigen p **labeled** with 111In. Scanning with a .gamma. camera 2 days later revealed radioactivity in a lesion in the sigmoid colon, in agreement with sigmoidoscopy findings.

IT **2169-64-4D**, Azaribine, conjugates with avidin or biotin and

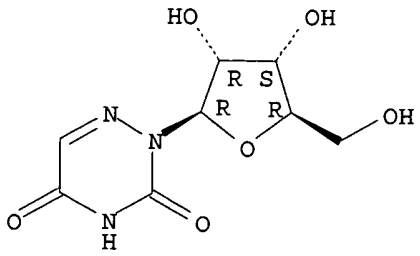
binding protein
RL: BIOL (Biological study)
(lesion targeting with, for detection and therapy)
RN 2169-64-4 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



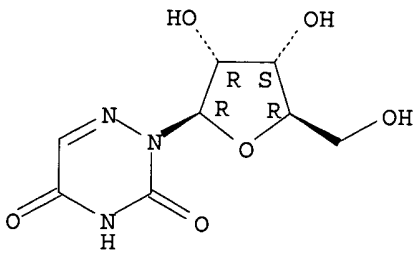
L6 ANSWER 7 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1989:72943 CAPLUS
DN 110:72943
TI Uracil ribonucleotide metabolism in rat and human glomerular epithelial and mesangial cells
AU Dumler, Francis; Cortes, Pedro
CS Dep. Med., Henry Ford Hosp., Detroit, MI, 48202, USA
SO Am. J. Physiol. (1988), 255(6, Pt. 1), C712-C718
CODEN: AJPHAP; ISSN: 0002-9513
DT Journal
LA English
AB Culture of rat mesangial cells in medium contg. dialyzed fetal calf serum resulted in UTP loss (28 nmol/mg DNA/h); the addn. of 2 .mu.M orotate to this medium resulted in net UTP accretion (5.42 nmol/mg DNA/h). Rat mesangial cells demonstrated 16- and 29-46-fold greater UTP and UDP-sugar pools, resp., than whole glomeruli. In human mesangial cells, 6-azauridine (500 .mu.M) decreased UDP-sugar pools by 48%, whereas uridine (50 .mu.M) produced a 2.5-fold increase. Human and rat mesangial cells had greater (1.8-6.1-fold) UDP-sugar pools than epithelial cells and 1.7-3.4-fold greater **labeled** precursor incorporation into EDP-sugars. Thus, glomerular cells utilize both exogenous orotate and uridine for ribonucleotide synthesis, and the extracellular concn. of these precursors markedly influence the formation and cellular content of DUP-sugars. This may represent diverse activity of glycosylating reactions.
IT **54-25-1**, 6-Azauridine
RL: BIOL (Biological study)
(uracil ribonucleotide metabolic pools response to, in human glomerular mesangial cells)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



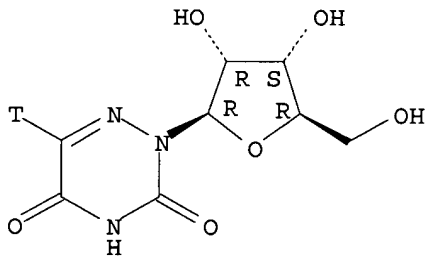
L6 ANSWER 8 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1988:33029 CAPLUS
DN 108:33029
TI Cloning and expression of the OMP decarboxylase gene URA4 from Schizosaccharomyces pombe
AU Bach, Marie Louise
CS Lab. Genet. Physiol., IBMC, Strasbourg, F-67084, Fr.
SO Curr. Genet. (1987), 12(7), 527-34
CODEN: CUGED5; ISSN: 0172-8083
DT Journal
LA English
AB URA4, The gene coding for orotidine monophosphate decarboxylaase (OMPdecase), was cloned from the fission yeast by homologous complementation and restricted in an Escherichia coli-S. pombe replicative plasmid to a 1.76-kb HindII fragment. This plasmid is maintained at a high copy no. in S. pombe and allows OMPdecase expression in Saccharomyces cerevisiae as well as in E. coli. After characterization by restriction mapping and Southern hybridization, the cloned gene was used as a probe to measure URA4 transcription and to examine its regulation. MRNA levels were measured by DNA/RNA filter-hybridization with pulse-**labeled** RNAs during 6-azauridine (6-AUR)-inhibited growth in wild-type and 6-AUR-sensitive strains. In S. pombe, the OMP analog 6-AUR does not regulate the level of OMPdecase formation as it does in S. cerevisiae, but rather modifies the ratio of total polyA+ to polyA- RNAs in the cell. Based on these results and on corresponding enzyme activities, this study demonstrates divergent pyrimidine pathway regulation in the 2 yeasts S. cerevisiae and S. pombe. Finally, the use of the URA4 gene as a convenient selective marker for genetic engineering in S. pombe is proposed.
IT **54-25-1**, 6-Azauridine
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(orotidine monophosphate decarboxylase gene of Schizosaccharomyces pombe regulation by, in Saccharomyces cerevisiae)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



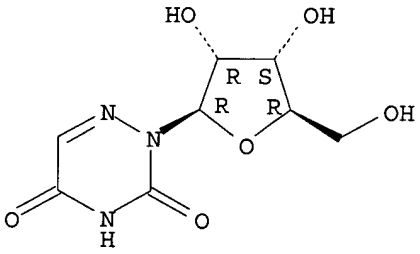
L6 ANSWER 9 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1985:75049 CAPLUS
DN 102:75049
TI Quantitative determination of nucleosides and their phosphate esters. 1. The acidic nucleosides, 3-deazauridine and 6-azauridine
AU Welch, A. D.; Nemec, J.; Panahi, J.
CS Clin. Pharmacol., St. Jude Child. Res. Hosp., Memphis, TN, 38101, USA
SO Int. J. Biochem. (1984), 16(6), 587-91
CODEN: IJBOBV; ISSN: 0020-711X
DT Journal
LA English
AB Acidic ribonucleosides, e.g., 3-deazauridine and 6-azauridine, were quant. sepd. from their metab. phoshphorylated esters by chromatog. on minicolumns contg. .apprx.1.8 mL of DEAE-cellulose equilibrated with 10 mM Na phosphate, pH 6.0-6.2. The chem. stable, 3H-**labeled** nucleosides were eluted from the minicolumns with 10 mM Na phosphate (pH 6.0); subsequently, the nucleotides were eluted completely with 0.5M HCl-0.5M NaCl. Quantitation was based on liq. scintillation counting. For example, this method was used to study phosphorylation of [5-3H]-6-azauridine and recoveries of total radioactivities after incubation with fractions of cultured human RPMI-6410 cells contg. uridine-cytidine kinase activity. [5-3H]-6-azauridine, at levels ranging 6.25 .mu.m-12.8 mM, yielded from 16.4-80.5% phosphorylation; recoveries of radioactivities were .apprx.100%.
IT **53615-16-0**
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, by DEAE-cellulose chromatog. and liq. scintillation counting)
RN 53615-16-0 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione-6-t, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



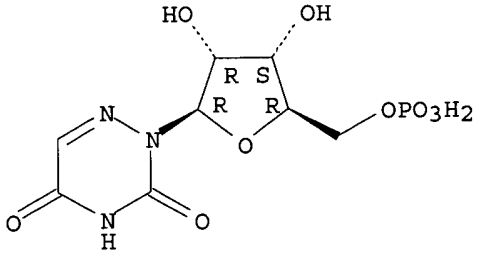
IT **54-25-1 2018-19-1**
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, by chromatog. on DEAE-cellulose minicolumns)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

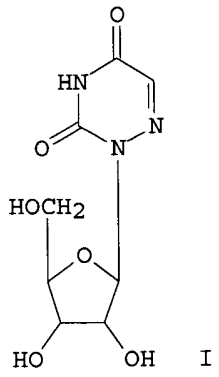


RN 2018-19-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-(5-O-phosphono-.beta.-D-ribofuranosyl)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 10 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1983:242 CAPLUS
DN 98:242
TI Stimulation by 6-azauridine of carbamoyl phosphate synthesis for pyrimidine biosynthesis in mouse spleen slices
AU Tatibana, Masamiti; Kita, Kazuko; Asai, Takashi
CS Sch. Med., Chiba Univ., Chiba, 280, Japan
SO Eur. J. Biochem. (1982), 128(2-3), 625-9
CODEN: EJBCAI; ISSN: 0014-2956
DT Journal
LA English
GI



I

AB Slices of spleen from anemic mice were incubated with [14C]bicarbonate in the presence and absence of 6-azauridine (I) [**54-25-1**] and the amts. of 14C that entered the de novo pyrimidine [289-95-2] biosynthetic pathway were assessed and compared. Compds. analyzed included carbamoylaspartate [13184-27-5], dihydroorotate [155-54-4], orotate [65-86-1] plus its derivs., acid-sol. uracil [66-22-8] and cytosine 5'-nucleotides, nucleic acid pyrimidines, free pyrimidine bases, and nucleosides. As the intracellular levels of carbamoyl phosphate [590-55-6] and acid-sol. deoxyribonucleotides are known to be relatively low, the radioactivities of these compds. were not measured. Degrdn. of **labeled** uridine was limited in this tissue, therefore the radioactivity of degradative products of pyrimidines was not considered. When the slices were incubated with 0.5 mM 6-azauridine for 10 min and then with [14C]bicarbonate for an addnl. 10 min and 30 min, the sum of

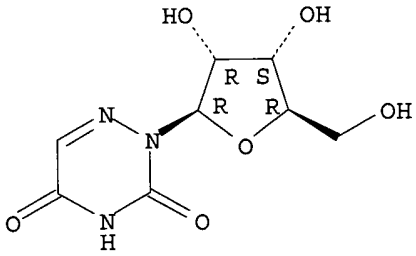
radioactivity found in the above compds., which represents the total amt. of 14C that entered the pyrimidine pathway, was 2.1 and 2.3 times greater than when the tissue slices were incubated in the absence of the analog. When the 14C distribution among the C atoms of the mols. of **labeled** carbamoylaspartate and uracil was investigated, >90% of the total 14C in these compds. was found to be derived directly from carbamoyl phosphate and the remaining portion was from aspartate, either in the presence or absence of 6-azauridine. There was no indication that 6-azauridine altered [14C]bicarbonate permeation through the cell membrane or its intracellular metab. These results, along with the pattern of early intermediate accumulation seen in the presence of 6-azauridine, indicate that 6-azauridine stimulates the prodn. of carbamoyl phosphate for the pyrimidine biosynthetic pathway in the mouse spleen. Of the radioactive early intermediates which accumulated, only orotate, its derivs. (orotidine [314-50-1] and orotidine 5'-monophosphate [2149-82-8]) or both appeared in the medium, presumably the result of leakage through the cell membranes. Stimulation of the pyrimidine pathway was not obsd. in the case of Ehrlich ascites tumor cells incubated under similar conditions with 6-azauridine.

IT **54-25-1**
RL: BIOL (Biological study)
(carbamoyl phosphate and pyrimidine biosynthesis response to, in spleen)

RN 54-25-1 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 11 OF 33 CAPLUS COPYRIGHT 2002 ACS

AN 1981:250 CAPLUS

DN 94:250

TI Selective enhancement of 5-fluorouridine uptake and action in rat hepatomas in vivo following pretreatment with D-galactosamine and 6-azauridine or N-(phosphonacetyl)-L-aspartate

AU Anukarahanonta, T.; Holstege, A.; Keppler, D. O. R.

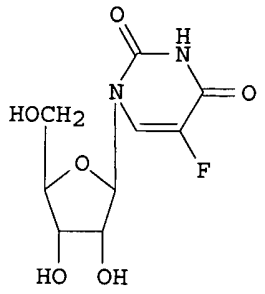
CS Biochem. Inst., Univ. Freiburg, Freiburg, D-7800, Fed. Rep. Ger.

SO Eur. J. Cancer (1980), 16(9), 1171-80
CODEN: EJCAAH; ISSN: 0014-2964

DT Journal

LA English

GI



I

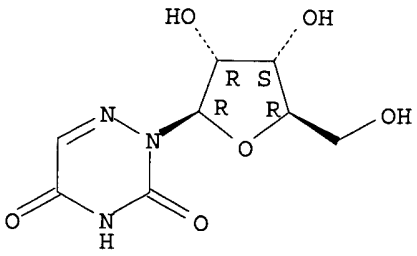
AB The sequential combination of three antipyrimidines was studied in rats carrying Morris hepatoma 7777, the AS-30D ascites hepatoma, or the solid intrahepatic tumor. The uptake of [14C]5-fluorouridine (I) [316-46-1] and its incorporation into RNA was selectively enhanced in hepatomas in vivo by pretreatment of the animals with D-galactosamine [7535-00-4] and an inhibitor of de novo pyrimidine synthesis, such as 6-azauridine [**54-25-1**] or N-(phosphonacetyl)-L-aspartate [51321-79-0]. This pretreatment resulted in a transient depletion of uridine phosphate pools which was the prerequisite for the subsequent increase in 5-fluorouridine phosphorylation in the hepatoma. It was demonstrated by radio-paper chromatog. that the formation of 5-fluorouridine diphosphate N-acetylhexosamines was markedly enhanced when the pretreatment included D-galactosamine. The incorporation of **labeled** precursors into nucleic acids of AS-30D cells treated with 5-fluorouridine indicated that a severe inhibition of thymidylate synthase was assocd. with only a moderate depression of DNA synthesis, as measured by incorporation into DNA of [3H]deoxyuridine and [14C] deoxyadenosine, resp. Survival of rats bearing the intrahepatic or the ascites form of the AS-30D hepatoma was prolonged most after the sequential treatment with D-galactosamine plus 6-azauridine plus 5-fluorouridine. When 6-azauridine was replaced in this combination by N-(phosphonacetyl)-L-aspartate, 80% of ascites hepatoma-bearing rats became tumor-free.

IT **54-25-1**
RL: BIOL (Biological study)
(fluorouridine uptake by neoplasm enhancement by)

RN 54-25-1 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 12 OF 33 CAPLUS COPYRIGHT 2002 ACS

AN 1979:435192 CAPLUS

DN 91:35192

TI Distribution of precursors **labeled** with radioactive isotopes within the early chick embryo

AU Jelinek, R.; Seifertova, M.; Tykva, R.

CS Inst. Exp. Med., Czechoslovak Acad. Sci., Prague, Czech.

SO Colloq. Sci. Fac. Med. Univ. Carol., [Pap.], 21st (1978), 267-71.

Editor(s): Klika, Eduard. Publisher: Univ. Karlova, Prague, Czech.
CODEN: 40MQAS

DT Conference

LA English

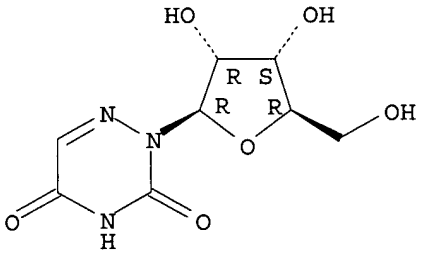
AB A semiconductog. method was used to det. 3H- and 14C-**labeled**, precursors along the longitudinal axis of staged, chicken embryos to permit quant, study of nucleic acid and protein synthesis. The method was sensitive enough even to detect specific alterations of DNA, RNA, and protein synthesis following administration of the embryotoxic compds., 6-azauridine and cytosine arabinoside. Thus, thymidine-methyl-3H, uridine-2-14C, leucine-U-3H, and leucine-U-14C were injected into White Leghorn embryos incubated at 37.5.degree., and after 1 h, samples were obtained, mounted on slides and the distribution of the **labeled** precursors was detd. with a semiconductor detector (fixed surface barrier Si detector) by the method of R. Tykva (1971, 1974). The method was sensitive enough even to detect specific alterations of DNA, RNA, and protein synthesis following administration of the embryotoxic compds., 6-azauridine and cytosine arabinoside.

IT **54-25-1**
RL: ANST (Analytical study)
(nucleic acids and proteins formation by chick embryo response to)

RN 54-25-1 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 13 OF 33 CAPLUS COPYRIGHT 2002 ACS

AN 1978:130689 CAPLUS

DN 88:130689

TI Varying distribution of 6-azauridine within the mouse fetoplacental unit

AU Jelinek, R.; Seifertova, M.; Tykva, R.

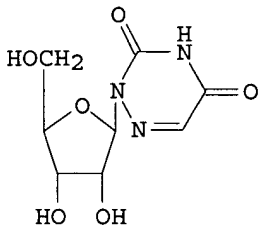
CS Inst. Exp. Med., Czech. Acad. Sci., Prague, Czech.

SO Folia Morphol. (Prague) (1977), 25(4), 387-95
CODEN: FMORAO; ISSN: 0015-5640

DT Journal

LA English

GI



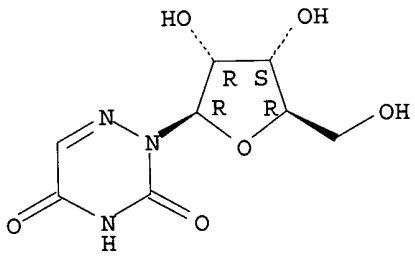
I

AB Following i.m. administration of 250 mg (embryotoxic dose) or 25 mg (nonembryotoxic dose) Riboazauracil (6-azauridine) (I) [**54-25-1**] together with 100 .mu.Ci I-3H to mice on the 14th day of pregnancy, marked differences in the distribution of radioactivity were obsd. in the embryonic tissue with regard to the high and low doses of I, even though the dose of radiolabeled I was the same. Similar differences in the distribution of **labeled** I were found when the 25-mg dose was given i.m. and the 250-mg dose was given intraamniotically. The embryotoxic dose (250 mg) induced in the placenta accumulation of activity which, 90 min after administration, was over an order of magnitude higher than the sp. activity in the fetus. The activity level in the fetus did not exceed the theor. mean sp. activity in the maternal tissue. The 250-mg dose of I caused extensive malformation in 80% of the fetuses.

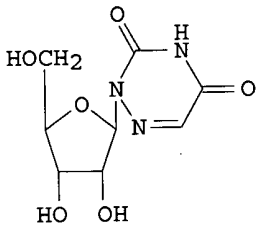
IT **54-25-1**
RL: PROC (Process)
(distribution of, in fetoplacental tissue)

RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 14 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1977:400161 CAPLUS
DN 87:161
TI Antiviral action and selectivity of 6-azauridine
AU Rada, Bretislav; Dragun, Marian
CS Inst. Virol., Slovak Acad. Sci., Bratislava, Czech.
SO Ann. N. Y. Acad. Sci. (1977), 284, 410-17
CODEN: ANYAA9
DT Journal
LA English
GI



I

AB 6-Azauridine (I) [**54-25-1**]-sensitive and -resistant viruses were compared with respect to their orotic acid pathways by **labeling** chick embryo cells with orotic acid-14C during the latent period of viral

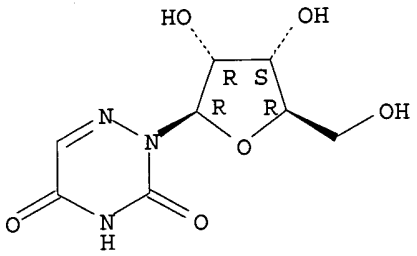
infection. No differences were detected among vaccinia, Newcastle disease, and vesicular stomatitis viruses. However, I inhibited transport of orotic acid into the cell by 30% and the incorporation of orotic acid into cellular RNA by 50%.

IT **54-25-1**
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antiviral activity of)

RN 54-25-1 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 15 OF 33 CAPLUS COPYRIGHT 2002 ACS

AN 1975:400314 CAPLUS

DN 83:314

TI Microsomal inducers of drug-metabolizing enzymes suppress cytidine nucleotide biosynthesis in rat liver

AU Seifert, J.; Vacha, J.

CS Inst. Pharmacol., Czech. Acad. Sci., Prague, Czech.

SO Arch. Biochem. Biophys. (1975), 167(1), 366-70
CODEN: ABBIA4

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

AB Of 17 compds. administered, only substances recognized as inducers of the mixed-function oxidases of liver microsomes, such as phenobarbital (I) [50-06-6] decreased the utilization of **labeled** orotic acid for the synthesis of rRNA cytidine nucleotides in rat liver.

IT **39455-15-7**
RL: BIOL (Biological study)
(cytidine nucleotide formation response to)

RN 39455-15-7 CAPLUS

L6 ANSWER 16 OF 33 CAPLUS COPYRIGHT 2002 ACS

AN 1974:67268 CAPLUS

DN 80:67268

TI Selective action of systemic fungicides and development of resistance

AU Dekker, J.

CS Lab. Fytopathol., Wageningen, Neth.

SO Pestic. Chem., Proc. Int. Congr. Pestic. Chem., 2nd (1972), Volume 5, 305-8. Editor(s): Tahori, Alexander S. Publisher: Gordon and Breach, New York, N. Y.
CODEN: 24WAAY

DT Conference

LA English

AB 6-Azauridine 5'-phosphate (I) [**2018-19-1**] (0.06-1.0 .tim.-4M) did not inhibit spore germination or germ tube growth in a resistant strain (Type R) of Cladosporium cucumerinum, but orotidine 5'-phosphate [2149-82-8] decarboxylation was completely inhibited. An aq. ext. of ground I-treated spores, however, showed a high orotidine 5'-phosphate

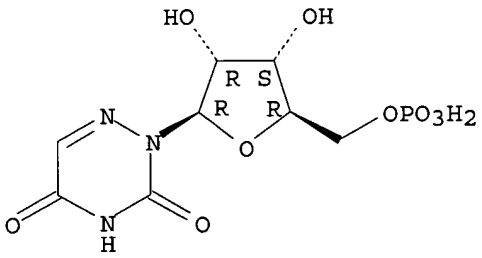
decarboxylase [9024-62-8] activity. Intact spores from the resistant strain were less permeable to 14C-**labeled** 6-azauracil [461-89-2] and 6-azauridine [**54-25-1**] than spores from the wild (sensitive) strain. Decreased permeability is probably the main factor in the resistance of type R spores to 6-azauracil and its derivs.

IT **2018-19-1**
RL: BIOL (Biological study)
(Cladosporium cucumerinum spore germination and growth in response to)

RN 2018-19-1 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-(5-O-phosphono-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

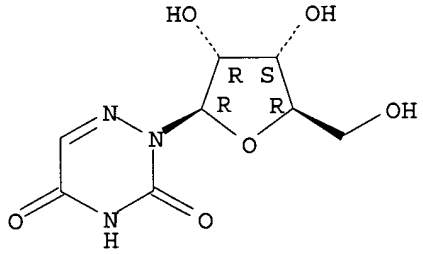


IT **54-25-1**
RL: BIOL (Biological study)
(Cladosporium cucumerinum spore permeability to)

RN 54-25-1 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2002 ACS

AN 1973:500530 CAPLUS

DN 79:100530

TI Effect of 5-azacytidine and 6-azauridine on the synthesis of DNA in embryonic mouse brain mitotic activity and migration of ventricular cells

AU Seifertova, M.; Cihak, A.; Vesely, J.

CS Inst. Org. Chem. Biochem., Czech. Acad. Sci., Prague, Czech.

SO Neoplasma (1973), 20(3), 243-9
CODEN: NEOLA4

DT Journal

LA English

AB 5-Azacytidine (I) [320-67-2] and 6-azauridine (II) [**54-25-1**] were toxic to the developing fetal brain, as indicated by pycnotic degeneration of ventricular cells and brain malformations in the mouse embryos subsequent to transplacental administration of the agents. II inhibited the uptake of simultaneously administered 3H-**labeled** thymidine, by the ventricular cells which simultaneously showed decreased mitosis; the pycnotic nuclei lost their capacity to migrate toward the

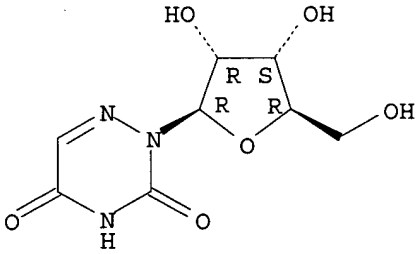
ventricular surface. In contrast, I-treated fetuses showed ventricular cells heavily **labeled** with thymidine; the nuclei of these cells were able to migrate toward the ventricular surface and underwent incomplete mitosis followed by pycnotic degeneration. The increased no. of mitotic figures seen after I was due to their abnormal accumulation.

IT **54-25-1**
RL: BIOL (Biological study)
(embryonic brain toxicity of)

RN 54-25-1 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 18 OF 33 CAPLUS COPYRIGHT 2002 ACS

AN 1972:535567 CAPLUS

DN 77:135567

TI Mechanism of resistance of Cladosporium cucumerinum against 6-azauracil and 6-azauridine

AU Dekhuijzen, H. M.; Dekker, J.

CS Inst. Org. Chem., TNO, Utrecht, Neth.

SO Acta Phytopathol. (1971), 6(1-4), 339-43
CODEN: APYBBR

DT Journal

LA English

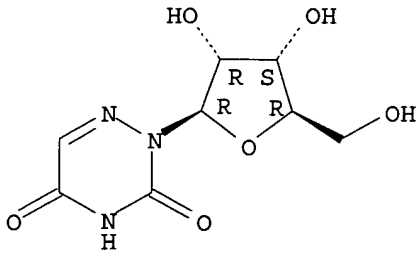
AB The wild (N) and resistant (R) strains of C. cucumerinum equally incorporated 14C-**labeled** 6-azauracil (I) [461-89-2] and showed no difference in the formation of 6-azauridine (II) [**54-25-1**] from I, but the amt. of 6-azauridine monophosphate (III) [**2018-19-1**] formed from II was 3-fold lower in the R strain than in the N strain. The poor ability to form III from II by strain R gave rise to a less effective inhibition of orotidine monophosphate decarboxylase [9024-62-8] which consequently resulted in less interference with the incorporation of orotic acid [65-86-1] into RNA. Resistance of strain R to I depended mainly on the failure to form significant amts. of III from II, whereas resistance to III depended on the inability of III to reach the enzyme, orotidine monophosphate decarboxylase, in sufficient amts. Thus, resistance to I and II was attributed to a defect at a stage of uridine kinase [9026-39-5] which normally converts I into II and into III.

IT **54-25-1**
RL: PRP (Properties)
(Cladosporium cucumerinum resistance to, mechanism of)

RN 54-25-1 CAPLUS

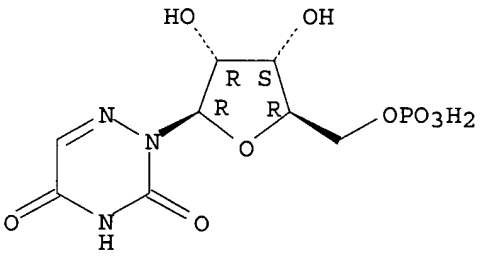
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **2018-19-1**
RL: FORM (Formation, nonpreparative)
(formation of, by Cladosporium cucumerinum in azauracil and azauridine resistance)
RN 2018-19-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-(5-O-phosphono-.beta.-D-ribofuranosyl)-(9CI) (CA INDEX NAME)

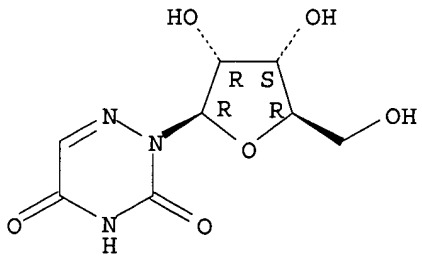
Absolute stereochemistry.



L6 ANSWER 19 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1972:511017 CAPLUS
DN 77:111017
TI Effect of 6-azauridine in the irradiation of tumors
AU Magdon, E.
CS Inst. Krebsforsch., Berlin, Ger.
SO Radiobiol., Radiother. (1971), 12(4), 535-44
CODEN: RDBGAT
DT Journal
LA German
AB The effect of 6-azauridine on the radiation-induced retardation of the growth of Yoshida sarcomas, Ehrlich carcinomas, benzopyrene-induced carcinomas, and on the growth and transplantability of spontaneous cancer of the breast was studied. Application of 6-azauridine before irradn. resulted in a significant amplification of the radiation effect. The extent of the amplification was dependent on the interval between 6-azauridine application and irradn. The max. intensifying and sensitizing effect was obtained when 6-azauridine was administered 24 hr before irradn. The radiation sensitizing effect of 6-azauridine is due to a partial synchronization whereby the main part of the cellular population at the time of irradn. is in a phase of max. radiosensitivity. Microautoradiographic examns. show that 24 hr after the application of 6-azauridine the incorporation of thymidine-3H into the DNA of ascites cells of Ehrlich-carcinoma is increased compared with that for the untreated cells. Since the **labeling** index is increased by the application of 6-azauridine, the early S-phase is the cellular stage that is responsible for the radiation sensitizing effect after a blockage of the G1 phase.
IT **54-25-1**
RL: BIOL (Biological study)
(neoplasm response to radiation in relation to)

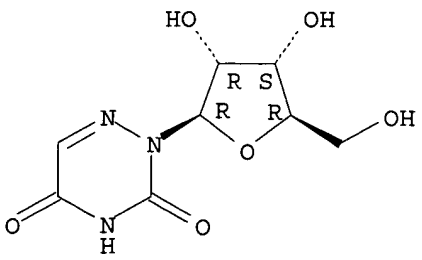
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



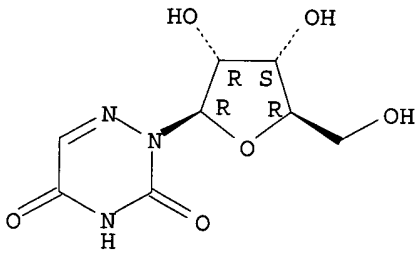
L6 ANSWER 20 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1972:82108 CAPLUS
DN 76:82108
TI Induction of tryptophan oxygenase in Cicer arietinum seedlings by indole-3-acetic acid and cyclic 3',5'-adenosine monophosphate
AU Azhar, S.; Krishna Murti, C. R.
CS Div. Biochem., Cent. Drug Res. Inst., Lucknow, India
SO Indian J. Biochem. Biophys. (1971), 8(4), 210-13
CODEN: IJBCAS
DT Journal
LA English
AB Tryptophan oxygenase activity was not detected in dormant seeds of Bengal gram, Cicer arietinum, but appeared after 48 hr of germination, reached a peak value in 120 hr, and remained unchanged thereafter. Seedlings aged 48, 72, or 96 hr exhibited a 2- to 3-fold increase in enzyme activity on preincubation in a medium contg. 1 .tim. 10-6M IAA [87-51-4] or 1 .tim. 10-4M cyclic AMP [60-92-4]. Beyond 96 hr of germination, IAA or cyclic AMP did not exert this stimulation of enzyme activity in vitro. IAA-mediated stimulation of activity in 48 hr or 72 hr seedlings was inhibited 50% by 1 .tim. 10-3M cycloheximide (I) [66-81-9], 1 .tim. 10-2M DL-ethionine [67-21-0], 1 .tim. 10-2M azauridine [**54-25-1**], or 1 .tim. 10-3M DL-p-fluorophenylalanine (II) [51-65-0]. Incorporation of 14C-**labeled** valine [72-18-4] into TCA precipitable proteins of 72 hr seedlings was stimulated by 1 .tim. 10-6M IAA. The in vitro enzyme stimulation by 1 .tim. 10-4M cyclic AMP in 72 hr seedlings was also inhibited by 1 .tim. 10-2M I or 1 .tim. 10-3M II.
IT **54-25-1**
RL: BIOL (Biological study)
(indoleacetic acid induced tryptophan oxygenase activity in chick pea inhibition by)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



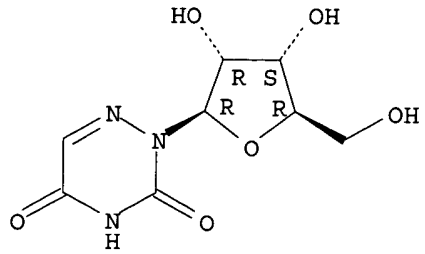
L6 ANSWER 21 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1972:21183 CAPLUS
DN 76:21183
TI Transfer of 6-azauridine through the placental barrier in the rat
AU Gutova, M.; Elis, J.; Raskova, H.
CS Fac. Pediatr., Charles Univ., Prague, Czech.
SO Neoplasma (1971), 18(5), 529-31
CODEN: NEOLA4
DT Journal
LA English
AB 6-Azauridine (I) [**54-25-1**] was readily and efficiently penetrated the placental barrier in rats on day 16 and 20 of gestation, supporting the high teratogenic and embryotoxic effects. Peak levels in the placenta and fetuses were obsd. 40-80 min after the i.v. injection of 4,5-14C-**labeled** I. The radioactivity in fetuses accounted for 35-36% of that in maternal plasma. The rate of penetration was about the same at both stages of gestation.
IT **54-25-1**
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(placental transport and teratogenicity of)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



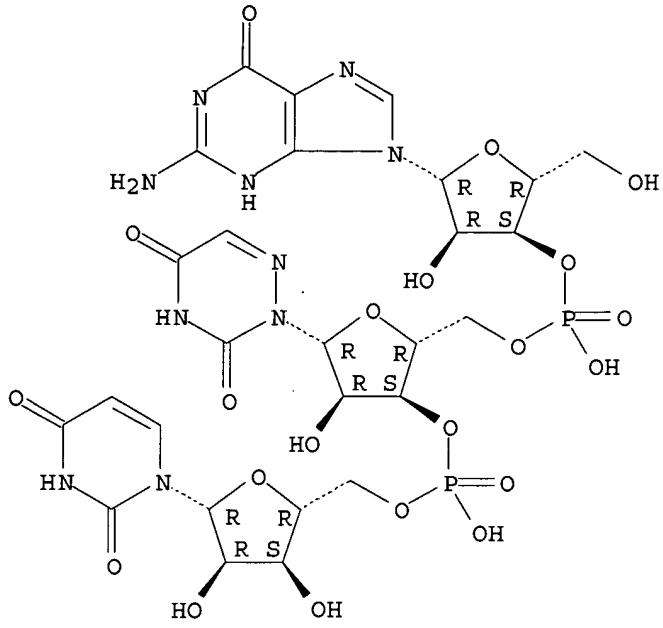
L6 ANSWER 22 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1972:130 CAPLUS
DN 76:130
TI Pharmacokinetics of 6-azauridine-4,5-14C in rats with adjuvant-induced polyarthritis
AU Perlik, F.; Elis, J.
CS Inst. Pharmacol., Czech. Acad. Sci., Prague, Czech.
SO Physiol. Bohemoslov. (1971), 20(2), 181-4
CODEN: PHBOAP
DT Journal
LA English
AB The blood, brain, kidney, and small intestine levels of 14C-**labeled** 6-azauridine (I) [**54-25-1**] were similar in control rats and in those with adjuvant-induced arthritis. Higher levels of antimetabolite were detected in the spleen of adjuvant rats for 15 min and liver for the full 90-min exptl. period. The rate of disappearance of I from the livers of control and adjuvant rats was almost the same. There may be more binding of I in the liver of adjuvant rats, but the reasons for this are not yet clear.
IT **54-25-1**
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(metabolism of, in arthritis)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



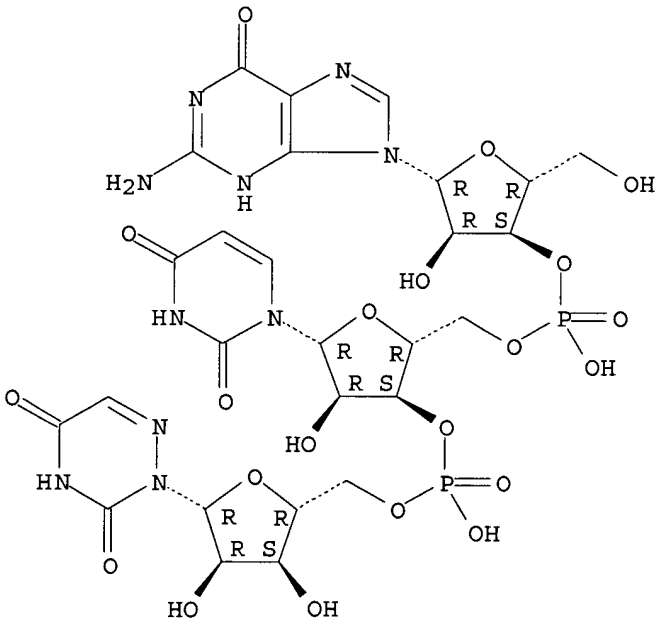
L6 ANSWER 23 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1971:401782 CAPLUS
DN 75:1782
TI Role of pharmacologically active nucleoside derivatives in RNA translation
AU Skoda, Jan
CS Inst. Org. Chem. Biochem., Czech. Acad. Sci., Prague, Czech.
SO Biochem. Aspects Antimetab. Drug Hydrozylation, Fed. Eur. Biochem. Soc., Meet., 5th (1969), Meeting Date 1968, 23-30. Editor(s): Shugar, D. Publisher: Academic, London, Engl.
CODEN: 22ZEAD
DT Conference
LA English
AB With a uridylic acid (I) and 6-azacytidylic acid (II) ratio of 3:1, slight amts. of phenylalanine-14C were incorporated into Escherichia coli in vitro. These copolymers had no messenger activity for any amino acid which included I or cytidylic acid (III) in its codon. II could not replace III or I in the codon. In the presence of I and II, the anomalous polyribonucleotide significantly enhanced the messenger activity of poly U for phenylalanine. The replacement of any pyrimidine ribonucleoside in the valine codon by 6-azauridine (IV) or 6-azacytidine (V) resulted in a nonfunctional unit. Binding of 14C-**labeled** valyl-tRNA to ribosomes was neg. even with triplets contg. IV or V in the 3rd position corresponding to that of inosine in the valine anticodon. Incorporation of 6-azapyrimidines into nucleic acids probably did not cause errors in the transfer of genetic information. Triplets contg. arabinose residues did not stimulate binding.
IT **32972-70-6**
RL: BIOL (Biological study)
(valyl-transfer ribonucleic acid binding to ribosomes in response to)
RN 32972-70-6 CAPLUS
CN Guanosine, uridylyl-(5'.fwdarw.3')-6-azauridylyl-(5'.fwdarw.3')- (8CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **32972-69-3**
RL: BIOL (Biological study)
(valyl-transfer ribonucleic acid binding to ribosomes stimulation by)
RN 32972-69-3 CAPLUS
CN Guanosine, 6-azauridylyl-(5'.fwdarw.3')-uridylyl-(5'.fwdarw.3')- (8CI) (CA INDEX NAME)

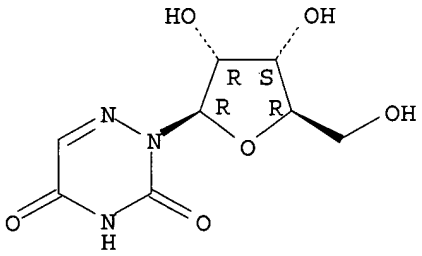
Absolute stereochemistry.



L6 ANSWER 24 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1971:96895 CAPLUS
DN 74:96895
TI Effect of 6-azaridine on the **labeling** index and the mean grain count of Ehrlich-carcinoma ascites cells after [3H]-thymidine incubation
AU Magdon, Erwin; Delzer, Wilfried

CS Inst. Krebsforsch., Dsch. Akad. Wiss. Berlin, Berlin-Buch, Ger.
SO Arch. Geschwulstforsch. (1970), 36(3), 247-52
CODEN: ARGEAR
DT Journal
LA German
AB The incorporation of thymidine-3H into Ehrlich ascitic carcinoma cells in mice 24 hr after i.p. injection of 6-azauridine was examd. At this time the **labeling** index of the carcinoma cells was increased 1.5-fold. The result sindicated that this increase was due to more cells entering the early S phase of the cell cycle and that the accumulation of cells in this phase is responsible for the radiosensitizing effect of 6-azauridine.
IT **54-25-1**
RL: BIOL (Biological study)
(thymidine metabolism by carcinoma in response to)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



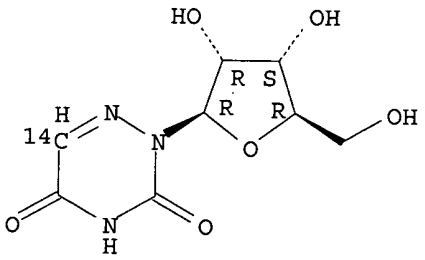
L6 ANSWER 25 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1970:531271 CAPLUS
DN 73:131271
TI Preparation of nucleotides and oligonucleotides by thermal reaction
IN Moravek, Josef; Skoda, Jan
SO Czech., 5 pp.
CODEN: CZXXA9
DT Patent
LA Czech
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 133464		19691015	CS	19651202

AB **Labeled** title compds. are obtained by thermal phosphorylation of nucleosides which are heated at 155-65.degree. with an alk. metal phosphate or nucleoside 2'(3')-phosphate in the ratio 1:5. The mixt. is chromatographed and the products isolated from the eluate. Treating **labeled** nucleosides (14C, 3H, 35S) with nonradioactive phosphates gives compds. contg. soft .beta.-emitters in the nucleoside moiety, reaction of unlabeled nucleosides with 32P-phosphates gives compds. contg. a hard .beta.-emitter in the phosphate residue. The following nucleosides were phosphorylated: cytidine, uridine, pseudouridine, orotidine, deoxycytidine, deoxyuridine, thymidine; (with a change in the base) 6-azauridine, 6-azacytidine; (with a substitution on the base) 5-hydroxyuridine; (with a change in the sugar) N-xylosyluracil; (antibiotics) tubercidine.
IT **29838-80-0**
RL: RCT (Reactant)
(reaction of, with **labeled** sodium phosphate)
RN 29838-80-0 CAPLUS
CN as-Triazine-5,6-14C2-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (8CI)

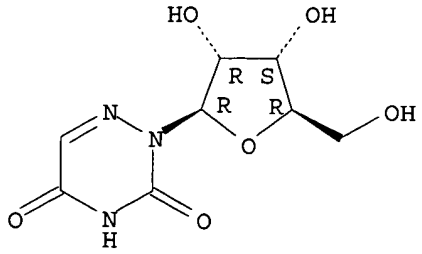
(CA INDEX NAME)

Absolute stereochemistry.



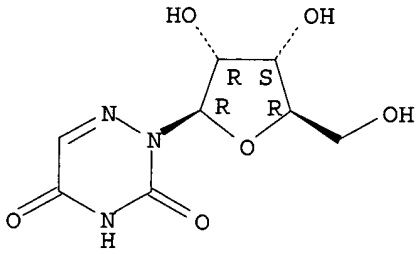
L6 ANSWER 26 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1970:118702 CAPLUS
DN 72:118702
TI 6-Azauridine as an inhibitor of the synthesis of Herpesvirus hominis
AU Falke, Dietrich; Rada, B.
CS Inst. Med. Microbiol., Johannes Gutenberg Univ., Mainz, Ger.
SO Acta Virol. (Prague), Engl. Ed. (1970), 14(2), 115-23
CODEN: AVIRA2
DT Journal
LA English
AB 6-Azauridine (AzUR) (10 mg/ml) added immediately after the infection of a rabbit kidney cell system with giant cell-forming Herpesvirus strains, inhibited the virus yield at 20 hr postinfection; this action of AzUR was more pronounced when cells were starved before infection. The addn. of uridine or cytidine completely reversed the AzUR inhibition, whereas thymidine or orotic acid did not alter the inhibitory effect of this compd., with respect to both giant cell formation and synthesis of infective particles. AzUR completely inhibited the Herpesvirus-induced giant cell formation when added until 90 min postinfection; later addn. of this antimetabolite exerted only a minor effect. Actinomycin C (1.5 .mu.g/ml) blocked the appearance of giant cells when add ed until 2 hr postinfection. Thus, RNA (probably m-RNA) synthesis is necessary before giant cell formation can be initiated. To correlate the early inhibitor-sensitive step indicated by giant cell fo rmation to the synthesis of infective particles, infected cultures were tr eated with cytosine arabinoside (100 .mu.g/ml) or cycloheximide (1.25 .mu.g/ml) at various times after infection. Drugs added up to .apprx.5 hr postinfection inhibited synthesis of infective virus particles. AzUR added to cultures at 150 min postinfection had no effect on giant cell formation; however, the addn. of this compd. plus cycloheximide completely inhibited the appearance of giant cells. AzUR reduced the incorporation of tritium-**labeled** thymidine into DNA of uninfected and virus-infected cells by 66% and 82%, resp. The redn. in viral DNA synthesis was attributed to the synthesis of new m-RNA before the beginning of viral DNA synthesis. Similar results were obtained with azaguanine.
IT **54-25-1**
RL: PROC (Process)
(virucidal action of, to herpes simplex virus)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 27 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1970:108077 CAPLUS
DN 72:108077
TI Role of uridine in the synthesis of phage-specific DNA in the cells of Escherichia coli infected with phage T2
AU Pravdina, N. F.; Galegov, G. A.
CS Inst. Virol., Moscow, USSR
SO Biokhimiya (1970), 35(1), 85-8
CODEN: BIOHAO
DT Journal
LA Russian
AB The role of 14C-**labeled** uridine in the synthesis of nucleic acids was studied in E. coli B cells infected with phage T2 to clarify the role of uridine kinase in the development of phage infection. Incorporation of the nucleosides into RNA decreased sharply during phage infection. DNA of infected bacteria showed a 3-fold increase in **labeled** uridine compared with the control. Preliminary 90-min pre-incubation of bacteria with 1000 .mu.g/ml 6-azauridine decreased incorporation of 14C-**labeled** uridine into RNA in noninfected bac-teria, but the ability to incorporate uridine into RNA in the in-fected cells was close to the same level in the presence and ab-sence of antimetabolite. 6-Azauridine inhibited incorporation of **labeled** uridine and thymidine into phage-induced DNA.
IT **54-25-1**
RL: BIOL (Biological study)
(deoxyribonucleic acid formation by bacteriophage-infected Escherichia coli in presence of)
RN 54-25-1 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

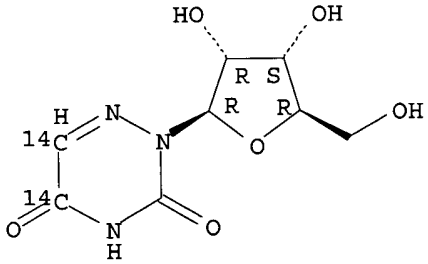
Absolute stereochemistry.



L6 ANSWER 28 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1969:419396 CAPLUS
DN 71:19396
TI Biochemically important **labeled** compounds. V. Biosynthetic preparation of 6-azauridine-4,5-14C and its isolation by gel filtration
AU Moravek, Josef; Skoda, Jan
CS Ceskoslov. Akad. Ved, Prague, Czech.

SO Collect. Czech. Chem. Commun. (1969), 34(6), 1837-40
CODEN: CCCCAK
DT Journal
LA English
AB 6-Azauracil-4,5-14C (I) is added to a medium contg. Escherichia coli (CA 51: 13056b) in the logarithmic phase of growth to obtain a 2 .times. 10-3M I. The fermentation is continued another 14 hrs. at 37.degree., the medium chilled, the bacterial mass and pptd. orotic acid centrifuged, the supernatant concd. in vacuo and filtered. The title compd. is sepd. in a 70% yield on a column of Biogel P-2 (200-400 mesh) in distd. water from unchanged I which is used in the next fermentation batch. The overall conversion is practically quant.
IT **25541-14-4**
RL: FORM (Formation, nonpreparative)
(formation of, by Escherichia coli)
RN 25541-14-4 CAPLUS
CN 1,2,4-Triazine-3,5(2H,4H)-dione-5,6-14C2, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 29 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1968:400055 CAPLUS
DN 69:55
TI Effect of 5'-terminal phosphate on the recognition of some dinucleoside phosphates by aminoacyl-14C-tRNA
AU Gruenberger, Dezider; Holy, Antonin; Sorm, Frantisek
CS Ceskoslov. Akad. Ved, Prague, Czech.
SO Biochim. Biophys. Acta (1968), 157(2), 439-42
CODEN: BBACAQ
DT Journal
LA English
AB 5'-Terminal phosphate increased not only the template activity of the triplet codon for valine, but also that of the dinucleoside phosphate. Whereas GpU was without effect, pGpU stimulated the binding of 14C-**labeled** valyl-tRNA to ribosomes. Similarly, pGpUpU had a markedly higher stimulatory effect than GpUpU. On the other hand, 3'-terminal phosphate, pGpUp, decreased the template activity of the dinucleotide. Dinucleotides with 5'-phosphate and contg. 5-bromomethyluridine BrU or 5-methyluridine instead of uridine stimulated the binding of valyl-tRNA to ribosomes. The increased template activity of pGpBrU in comparison with pGpU could be anticipated on the basis of greater stability of the binding between halogen derivs. of uridine and the complementary nucleosides in the anticodon part of the tRNA mol. In contrast, by substitution of a Me group in the N-3-position of uridine N-3-MeU for the H atom involved in the codon-anticodon base pairing, the pGpN-3-MeU formed was totally inactive in this system. Similarly, substitution of 6-azauridine for uridine abolished the template activity of the nucleotide. However, the 5'-terminal phosphate did not enhance the effect of the appropriate doublet or triplet on the binding of aspartyl-tRNA or glutamyl-tRNA to ribosomes. These results demonstrated that a dinucleotide with 5'-terminal phosphate may only occasionally be recognized by

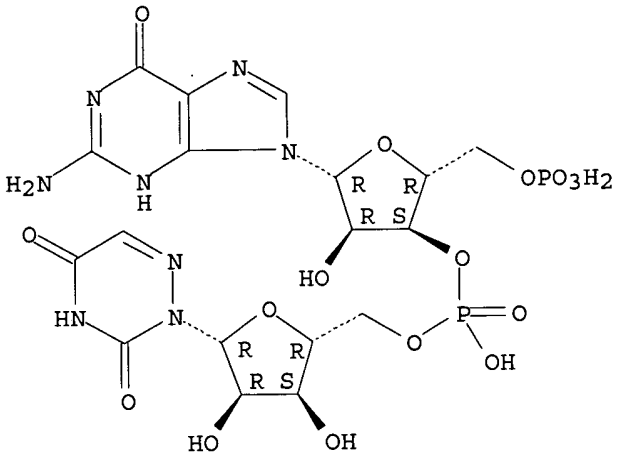
aminoacyl-tRNA; this is possibly related to the evolution of the code as was proposed by Rottman and Nirenberg (1966).

IT **20512-61-2**
RL: BIOL (Biological study)
(as template for valyl-ribonucleic acid)

RN 20512-61-2 CAPLUS

CN 6-Azauridine, 5'-O-phosphonoguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 30 OF 33 CAPLUS COPYRIGHT 2002 ACS

AN 1968:36337 CAPLUS

DN 68:36337

TI Thyrotropin stimulation of pyrimidine nucleotide Synthesis in bovine thyroid

AU Lindsay, Raymond H.; Cash, Anna G.; Hill, Johnie Banks

CS Univ. of Alabama Med. Center, Birmingham, Ala., USA

SO Biochem. Biophys. Res. Commun. (1967), 29(6), 850-5
CODEN: BBRCA9

DT Journal

LA English

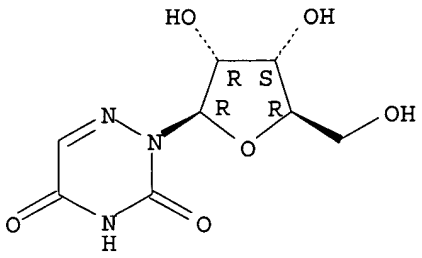
AB One and 20 micromoles of azauridine per 3 cc. vol. inhibited by 85.1 and 98.4%, resp., the formation of 14CO2 from orotic acid-carboxyl-14C in bovine thyroid slices. However, 20 micromoles of azauridine had no effect on the oxidn. of glucose-14C. Thyrotropin (1 unit 3 cc.) enhanced by 30% the conversion of the **labeled** orotic acid to pyrimidine nucleotide in the absence of azauridine but had no effect in the presence of 5 micromoles azauridine. The thyrotropin stimulation occurred both in the presence and in the absence of glucose (4 micromoles). **Labeled** CO2 production from orotic acid-carboxyl-14C in bovine thyroid slices is due almost exclusively to the formation of pyrimidine nucleotides. Thyrotropin stimulates total pyrimidine nucleotide synthesis in bovine thyroid slices. These findings along with previously reported findings strongly indicate that 1 site at which thyrotropin may affect nucleic acid synthesis is the formation of nucleotides.

IT **54-25-1**
RL: BIOL (Biological study)
(pyrimidine nucleotide formation inhibition by, in thyroid gland, thyrotropin in relation to)

RN 54-25-1 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1967:508969 CAPLUS
DN 67:108969
TI Nucleoside 5'-polyphosphates and .alpha.,.omega.-bis-(nucleoside-5')polyphosphates
IN Moffatt, John G.
PA Syntex Corp.
SO U.S., 10 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

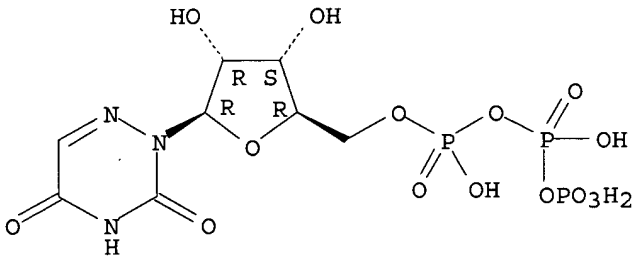
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3321463		19670323	US	19650317

AB A process is claimed for the prepn. of the title compds. which comprises treating, under anhyd. conditions in a dialkyl sulfoxide, a nucleoside 5'-polyphosphate terminal phosphoramidate tertiary amine salt with a tertiary amine salt of an inorg. phosphate or a nucleoside 5'-phosphate. Little tendency for the polyphosphates to degrade to lower phosphates is encountered in this process in contrast to the general method using pyridine solvent. Na4P2O7.10H2O (1 millimole) in 10 ml. H2O was passed through a column of Dowex 50W-X8 ion exchange resin (C5H5N form). The effluent and a 30-ml. H2O wash was evapd. in vacuo to a 10 ml. vol. C5H5N (30 ml.) and 4.2 millimoles Bu3N were added and the homogeneous soln. was evapd. to a sirup and dried by four successive evapns. in vacuo with 10-ml. portions dry C5H5N and two evapns. with 5-ml. portions dry C6H6. The pyrophosphate was dissolved in 4 sep. 1 ml. portions dry Me2SO and added successively to 0.25 millimole dry 4-morpholino-N,N'-dicyclohexylcarboxamidinium salt of 2'-deoxyadenosine 5'-phosphoromorpholidate. The resulting clear soln. was kept 4 days at room temp. (the disappearance of the phosphoromorpholidate was followed by paper chromatog.). The mixt. was treated with 30 ml. H2O and the soln. chromatographed on DEAE-cellulose (HCO3-form). The pooled triphosphate fraction was evapd. to dryness at 30-5.degree. and (Et3NH)HCO3 removed by evapn. with MeOH. The residue was dissolved in 5 ml. MeOH and treated with a N soln. (6 equivs.) of NaI in Me2CO and 75 ml. Me2CO. The ppt. was collected by centrifugation, washed with Me2CO and dried over P2O5 to give the Na salt of 2'-deoxyadenosine 5'-triphosphate as a white chromatographically homogeneous powder. Similarly prepd. in 75-80% yields were the Na salts of 5'-triphosphate: 2'-deoxyguanosine, 6-azauridine, cytidine, 2'-deoxycytidine, and thymidine. Dicyclohexylcarbodiimide (5 millimoles) in 35 ml. tert-BuOH was added over 9 hrs. to a refluxing soln. of 1 millimole of the morpholine salt of ADP and 2.4 millimoles morpholine in 20 ml. aq. 50% tert-BuOH. Refluxing was continued until paper chromatog. showed the absence of ADP. The mixt. was cooled and filtered, and the filtrate evapd. in vacuo. The aq. conc. was washed by extn. with Et2O and, after adjusting to pH 8, was chromatographed to give 83% P1-(adenosine-5')-P2-(4'-morpholino)diphosphate as the Et3NH salt (I). Substituting NH4OH for morpholine gave the Et3NH salt of P1-(adenosine-5')-P2-aminotriphosphate. I was dissolved in a MeOH soln.

of the 4-morpholine salt of N,N'-dicyclohexylcarbodiimide. The soln. was evapd. to dryness and the residue dissolved in MeOH and pptd. with Et2O to give the 4-morpholine N,N'-dicyclohexylcarboxamidinium salt (II) of I. Similarly prepd. were the Et3NH salts of P1-(adenosine-5')-P3-(4'-morpholino)triphosphate (III) and P1-(uridine-5')-P3-(4'morpholino)phosphate (IV) and the 4-morpholino-N,N'-dicyclohexylcarboxamidinium salts (V) of III and IV. I was mixed with an excess of M soln. of CaCl2 in EtOH to ppt. the Ca salt of I. II (0.25 millimole) and 1 millimole of Bu3NH orthophosphate (VI) in 3 ml. Me2SO was heated 24 hrs. at 40.degree.. The mixt. was dild. with 40 ml. H2O and chromatographed on DEAE-cellulose (HCO3-form) to give 71% ATP (isolated as the Na salt). II (0.1 millimole) and 0.3 millimole of 32P-**labeled** VI (contg. 2 .mu.c. of 32P) in 2 ml. Me2SO was heated 45 hrs. at 35.degree. and worked up to yield the Na salt of ATP-.gamma.-32P. V (0.1 millimole) and 0.4 millimole of the Bu3NH salt of AMP in 2 ml. Me2SO was kept 4 days at room temp. to give 31% of the Na salt of .alpha., .zeta.-bis(adenosine-5')tetraphosphate.

IT **18423-44-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 18423-44-4 CAPLUS
CN as-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl-, 5'-(tetrahydrogen triphosphate), sodium salt (8CI) (CA INDEX NAME)

Absolute stereochemistry.



●x Na

L6 ANSWER 32 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1967:113266 CAPLUS
DN 66:113266
TI Action of azauracil derivatives on Saccharomyces cerevisiae. II. Differences in metabolic behavior between normal and 6-azauracil-resistant strains
AU Wiesenfeld, Mireille; Crokaert, Robert
CS Fac. Med. Univ. Libre, Brussels, Belg.
SO Bull. Soc. Chim. Biol. (1967), 49(2), 191-203
CODEN: BSCIA3
DT Journal
LA French
AB cf. CA 66, 53169f. The uptake of 6-azauracil-2-14C (I) by normal S. cerevisiae cells rapidly reached a max. by the 60th-120th min. of incubation, then slowly declined. The uptake by a 6-azauracil-resistant mutant rapidly reached a plateau, which corresponded to 11% of the max. uptake observed in the normal strain. Similarly, the uptake of uracil-2-14C (II) by the resistant strain was only 0.2% that of the normal strain, although the uptake increased with incubation time in both strains. Unlabeled compds. chromatographically similar to orotic acid (or orotidine) and **labeled** 6-azauridine appeared in the medium after incubation of the normal strain with I, but not after incubation of the

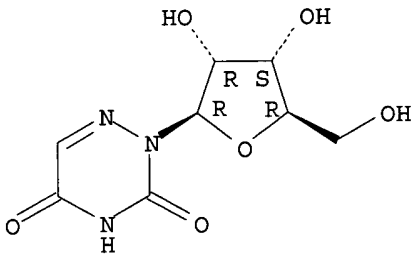
resistant strain. One and 2 unidentified **labeled** compds. were detected in the medium after incubation of the resistant and normal strains, resp., with II. Acid-sol. exts. of normal cells grown on I contained I, 6-azauridine, and an unidentified compd., while exts. from the resistant strain contained only I. Acid-sol. exts. of normal cells contained II and 3 unidentified **labeled** compds. after incubation with II, while the resistant strain contained only II. Uracil (0.5 micromole/ml.), dihydrouracil (1.0 micromole/ml.), and N-carbamoyl-.beta.-alanine (2.5 micromoles/ml.) reduced the uptake of I by the normal cells by 85, 64, and 35%, resp. II was incorporated into the RNAs of the normal but not the resistant strain. The specific activity of uridine phosphorylase was similar in both strains, excluding a loss of this enzyme in the mutant. 15 references.

IT **54-25-1**
RL: BIOL (Biological study)
(as 6-azauracil metabolite in Saccharomyces cerevisiae)

RN 54-25-1 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2002 ACS

AN 1967:45237 CAPLUS

DN 66:45237

TI Relation between the metabolic effects and the pregnancy-interrupting property of 6-azauridine in mice

AU Raska, Karel, Jr.; Zedeck, Morris S.; Welch, Arnold D.

CS Sch. of Med., Yale Univ., New Haven, Conn., USA

SO Biochem. Pharmacol. (1966), 15(12), 2136-8
CODEN: BCPCA6

DT Journal

LA English

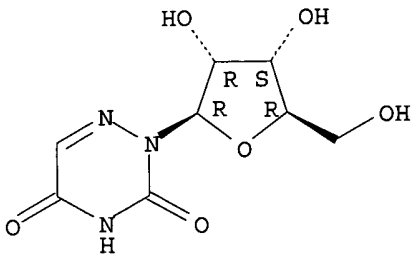
AB When administered soon after implantation of the fertilized ovum, a single i.p. injection of 6-azauridine (I) (500 mg./kg.) into mice resulted in complete resorption of the embryo, whereas, when administered during the 2nd half of pregnancy, even repeated injection of I did not consistently produce an interruption of pregnancy. To det. the difference between the effects of I upon the early and late stages of fetal development, the metabolic transformation and biochem. effects of I were compared in 6-day embryos and in 15-day fetuses of mice. Injections of I inhibited the incorporation of **labeled** orotic acid into nucleic acids to the same extent at both days 6 and 15 of fetal development. In vitro, I (5 .times. 10-5M) inhibited orotidylate decarboxylase activity in particle-free supernatant fractions to the same extent in both the fetus and embryo. The time difference in the pregnancy-interrupting effect of I thus reflects a difference in sensitivity of embryonic and fetal tissues to inhibition of nucleic acid synthesis.

IT **54-25-1**
RL: BIOL (Biological study)
(abortion from, nucleic acid formation and)

RN 54-25-1 CAPLUS

CN 1,2,4-Triazine-3,5(2H,4H)-dione, 2-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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FULL ESTIMATED COST

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DICTIONARY FILE UPDATES:  23 SEP 2002  HIGHEST RN 454421-17-1

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in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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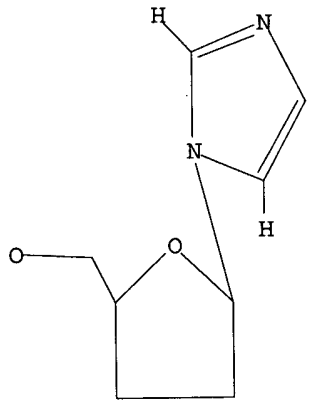


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L2 161 SEA SSS FUL L1

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L3 85 L2

=> s l3 and label
48825 LABEL
L4 0 L3 AND LABEL

=> s l3 and label?
374492 LABEL?
L5 15 L3 AND LABEL?

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L15 NOT FOUND
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L5 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 2001:851808 CAPLUS
DN 135:367666
TI Nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays
IN McGall, Glenn; Barone, Anthony D.
PA USA
SO U.S. Pat. Appl. Publ., 47 pp., Cont.-in-part of U.S. Appl. 2001 18,514.
CODEN: USXXCO

DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001044531	A1	20011122	US 2001-780574	20010209
	US 2001018514	A1	20010830	US 1998-126645	19980731
PRAI	US 1998-126645	A2	19980731		

OS MARPAT 135:367666

AB Nucleic acid **labeling** compds. contg. heterocyclic derivs. are disclosed. The heterocyclic deriv. contg. compds. are synthesized by condensing a heterocyclic deriv. with a cyclic group (e.g. a ribofuranose deriv.). The **labeling** compds. are suitable for enzymic attachment to a nucleic acid, either terminally or internally, to provide a mechanism of nucleic acid detection. Thus, a no. of biotin- or fluorescein purine- and pyrimidine-.beta.-D-ribofuranoside analogs were prepd. These analogs were successfully incorporated into hybridization probes (using terminal deoxynucleotidyltransferase) and utilized in single nucleotide polymorphism geno-typing using micro-chip arrays.

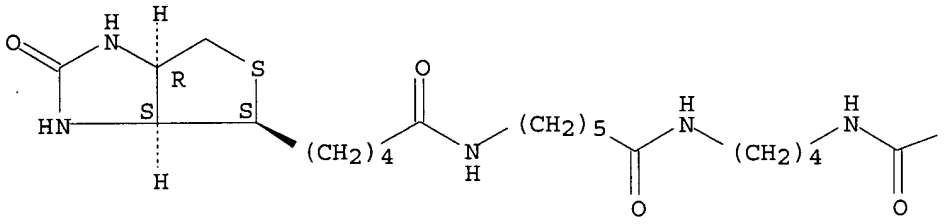
IT **257297-78-2P 257297-98-6P 373390-75-1P**
373391-24-3P 373391-42-5P 373391-43-6P
RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays)

RN 257297-78-2 CAPLUS

CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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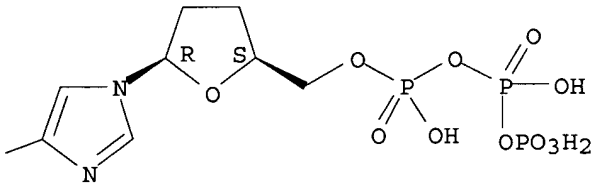

RN 257297-98-6 CAPLUS

CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

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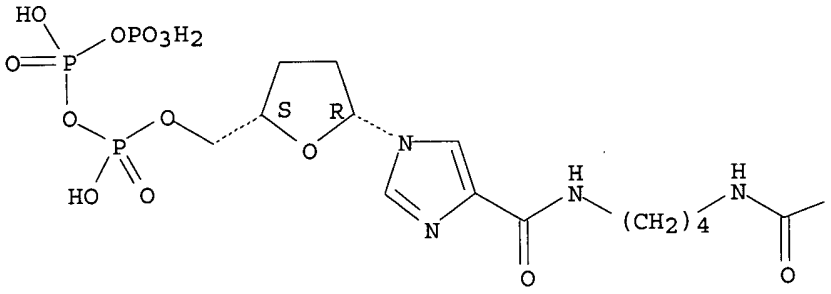

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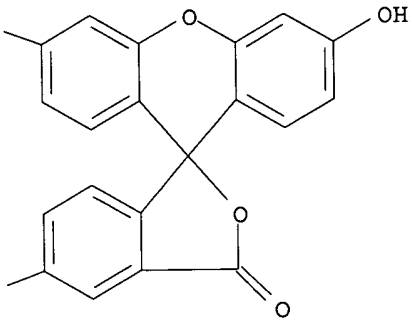

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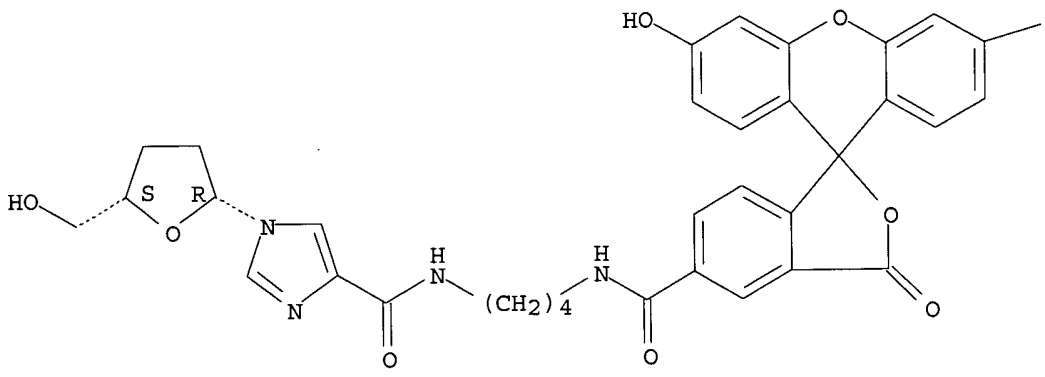
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, 3',6'-dihydroxy-3-oxo-N-[4-[[[1-[(2R,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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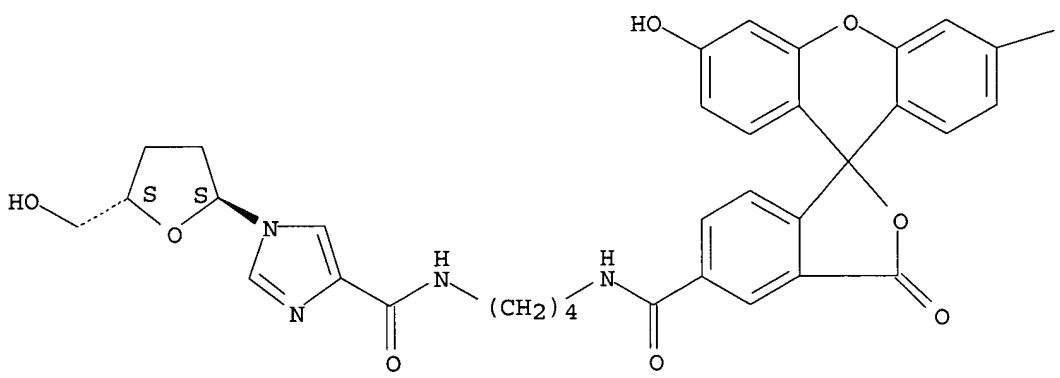
Absolute stereochemistry.

PAGE 1-A



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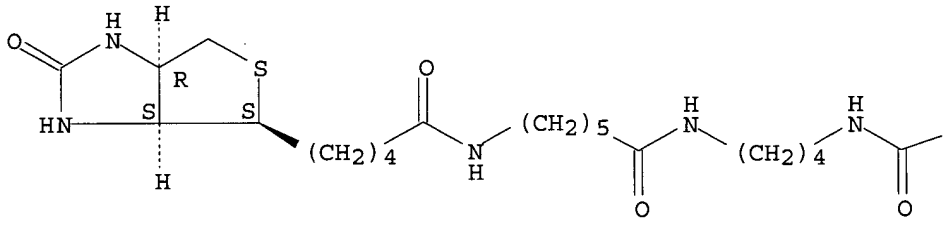
RN 373391-42-5 CAPLUS
CN Triphosphoric acid, P-[[(2S,5S)-5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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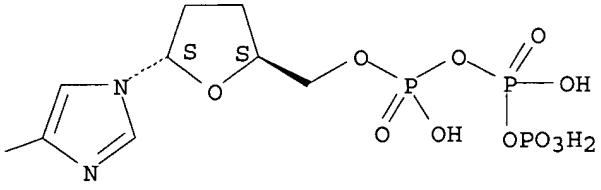

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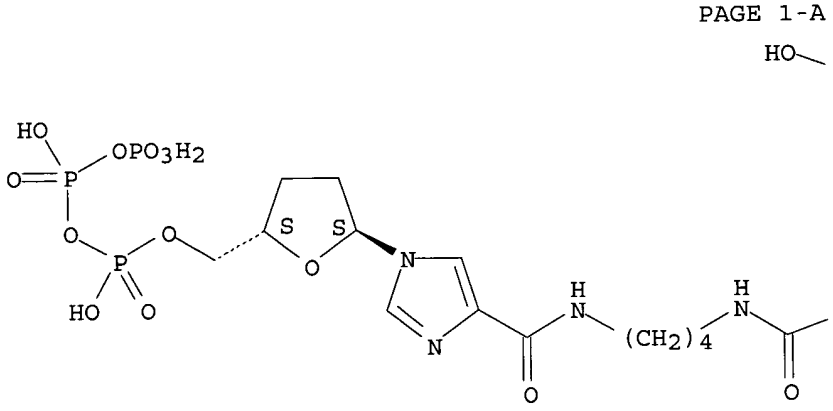
CN Triphosphoric acid, P-[[(2S,5S)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-

yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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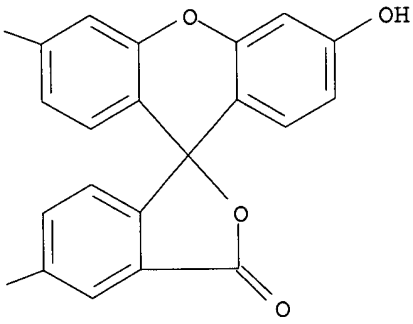
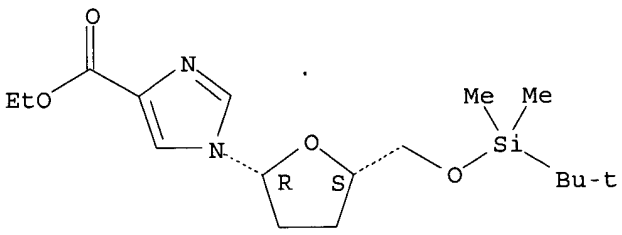


IT **257297-73-7P 257297-74-8P 257297-75-9P**
257297-76-0P 257297-77-1P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays)

RN 257297-73-7 CAPLUS

CN 1H-Imidazole-4-carboxylic acid, 1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]-, ethyl ester (9CI) (CA INDEX NAME)

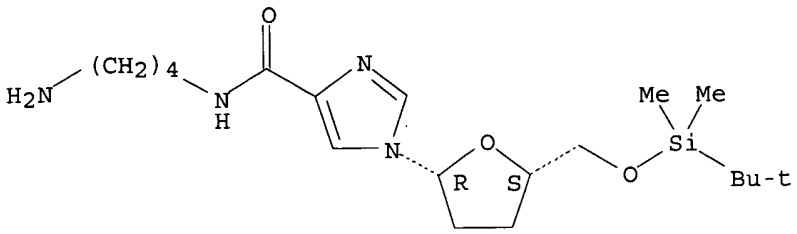
Absolute stereochemistry.



RN 257297-74-8 CAPLUS

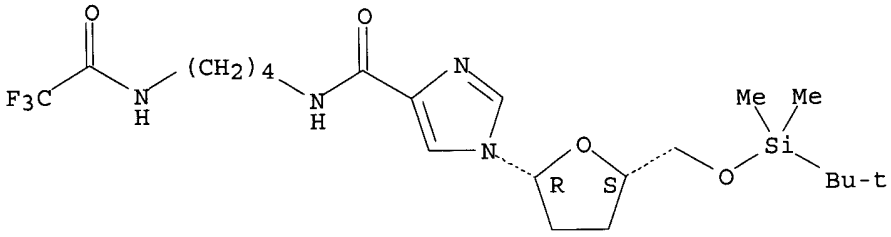
CN 1H-Imidazole-4-carboxamide, N-(4-aminobutyl)-1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



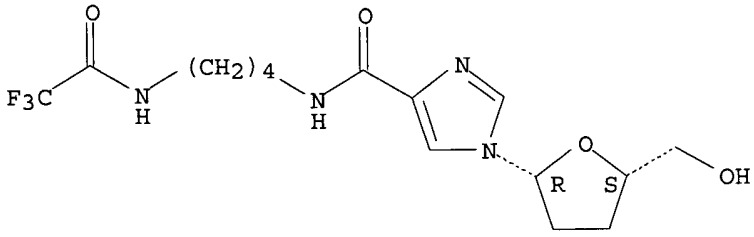
RN 257297-75-9 CAPLUS
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



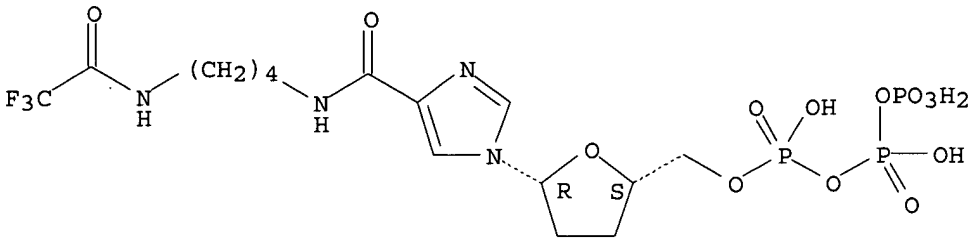
RN 257297-76-0 CAPLUS
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 257297-77-1 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-tetrahydro-5-[4-[[[4-[(trifluoroacetyl)amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

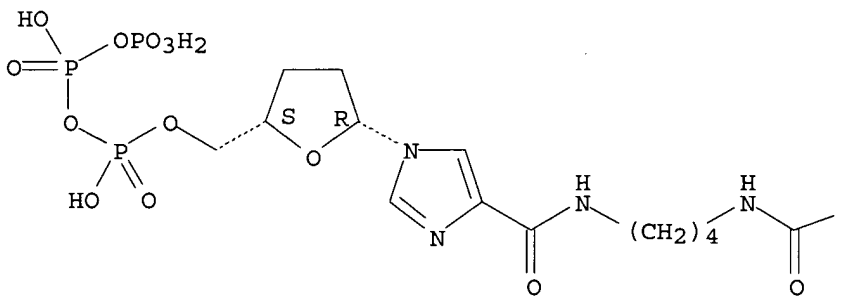
Absolute stereochemistry.



L5 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 2001:675161 CAPLUS
DN 136:37868
TI Novel nucleoside triphosphate analogs for the enzymatic **labeling** of nucleic acids
AU Barone, A. D.; Chen, C.; McGall, G. H.; Rafii, K.; Buzby, Philip R.; Dimeo, James J.
CS Affymetrix, Inc., Santa Clara, CA, USA
SO Nucleosides, Nucleotides & Nucleic Acids (2001), 20(4-7), 1141-1145
CODEN: NNNAFY; ISSN: 1525-7770
PB Marcel Dekker, Inc.
DT Journal
LA English
AB We have evaluated several novel nucleotide analogs suitable for enzymic **labeling** of nucleic acid targets for a variety of array-based assays. Two new reagents in particular, a C4-**labeled** 1-(2',3'-dideoxy-.beta.-D-ribofuranosyl) imidazole-4-carboxamide 5'-triphosphate and an N1-**labeled** 5-(.beta.-D-ribofuranosyl)-2,4(1H,3H)-pyrimidinedione 5'-triphosphate , were found to be excellent substrates for **labeling** with terminal deoxynucleotidyl transferase and T7 RNA polymerase, resp.
IT **257297-98-6 380601-34-3**
RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(prepn. of nucleoside triphosphate analogs for enzymic **labeling** of nucleic acids)
RN 257297-98-6 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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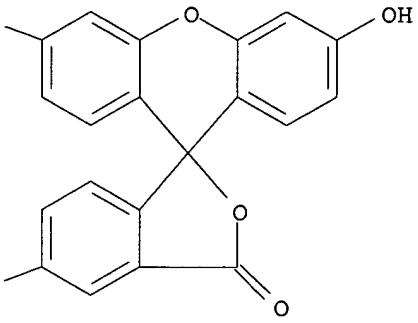
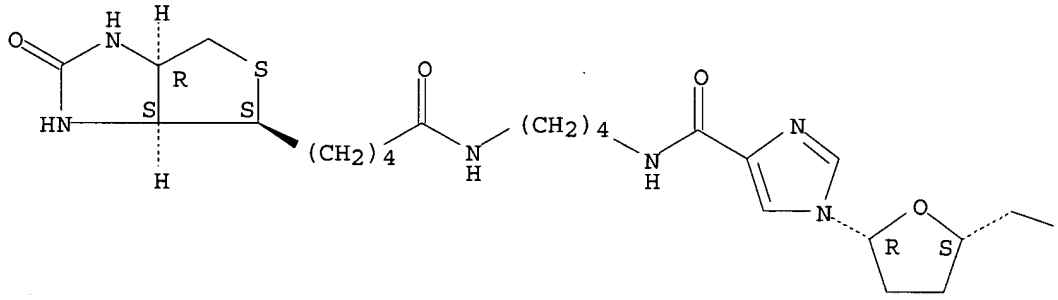


RN 380601-34-3 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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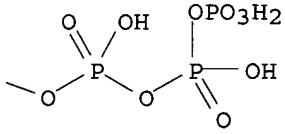

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 2000:98825 CAPLUS
DN 132:133201
TI Nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays
IN McGall, Glenn H.; Barone, Anthony D.
PA Affymetrix, Inc., USA
SO PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DT Patent

LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000006771	A2	20000210	WO 1999-US12390	19990720
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	US 2001018514	A1	20010830	US 1998-126645	19980731
	AU 9952035	A1	20000221	AU 1999-52035	19990720
	EP 1124838	A2	20010822	EP 1999-937150	19990720
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002521495	T2	20020716	JP 2000-562553	19990720
PRAI	US 1998-126645	A	19980731		
	WO 1999-US12390	W	19990720		

OS MARPAT 132:133201

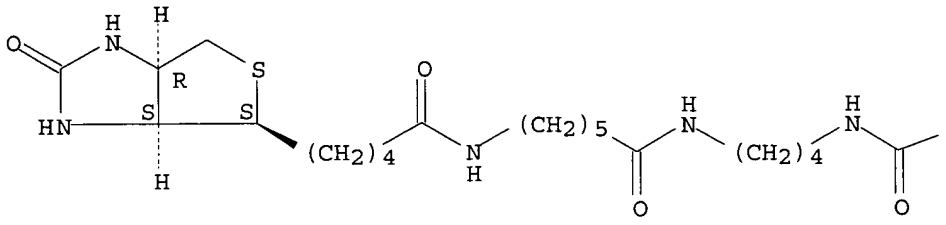
AB Nucleic acid **labeling** compds. contg. heterocyclic derivs. are disclosed. The heterocyclic deriv. contg. compds. are synthesized by condensing a heterocyclic deriv. with a cyclic group (e.g. a ribofuranose deriv.). The **labeling** compds. are suitable for enzymic attachment to a nucleic acid, either terminally or internally, to provide a mechanism of nucleic acid detection. Thus, a no. of biotin- or fluorescein purine- and pyrimidine-.beta.-D-ribofuranoside analogs were prepd. These analogs were successfully incorporated into hybridization probes (using terminal deoxynucleotidyltransferase) and utilized in single nucleotide polymorphism genotyping using microchip arrays.

IT **257297-78-2P 257297-98-6P**
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays)

RN 257297-78-2 CAPLUS

CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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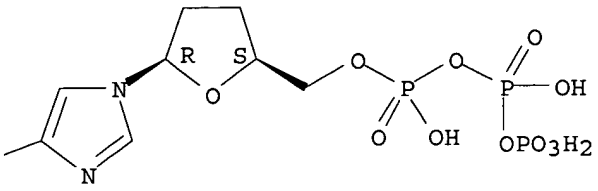
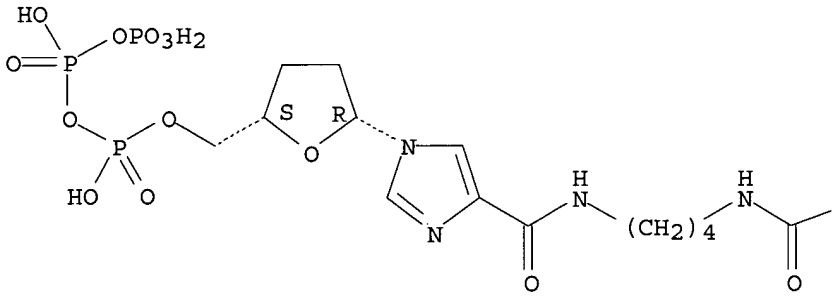


RN 257297-98-6 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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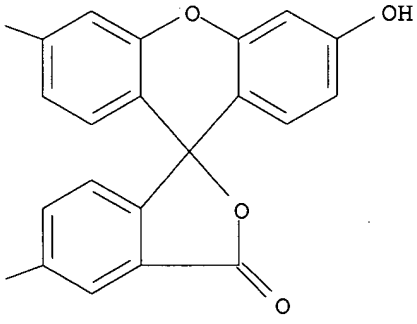

IT **257297-73-7P 257297-74-8P 257297-75-9P**
257297-76-0P 257297-77-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleotide analogs and their use in **labeling** nucleic acids for hybridization assays)
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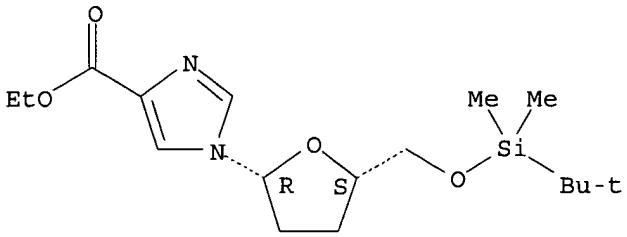
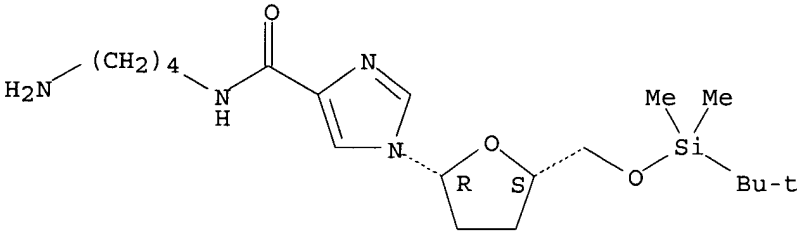
CN 1H-Imidazole-4-carboxylic acid, 1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



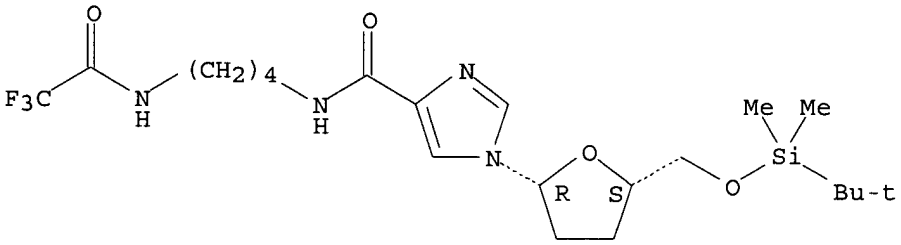
RN 257297-74-8 CAPLUS
CN 1H-Imidazole-4-carboxamide, N-(4-aminobutyl)-1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



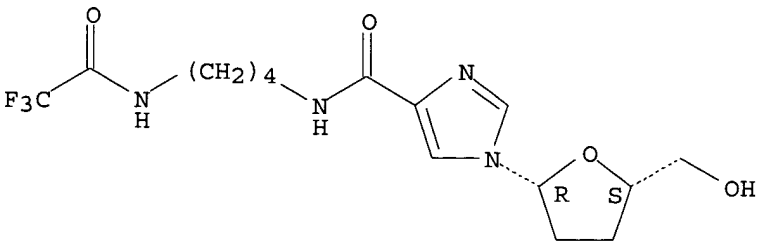
RN 257297-75-9 CAPLUS
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



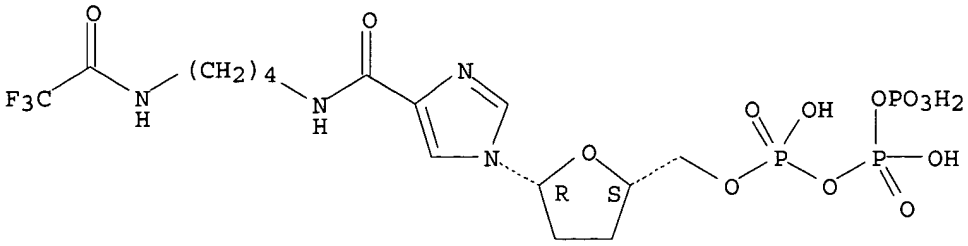
RN 257297-76-0 CAPLUS
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



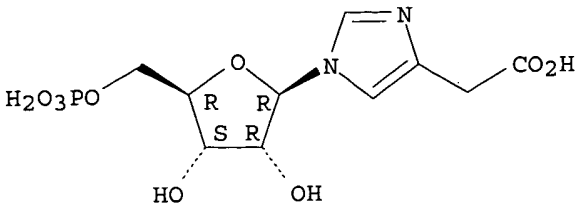
RN 257297-77-1 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-tetrahydro-5-[4-[[[4-[(trifluoroacetyl)amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



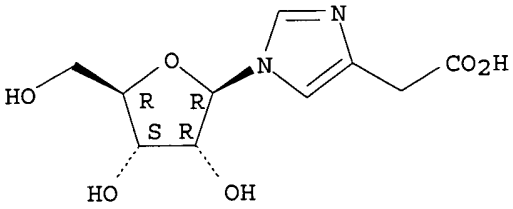
L5 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 1995:715348 CAPLUS
DN 123:103310
TI Imidazoleacetic acid, a .gamma.-aminobutyric acid receptor agonist, can be formed in rat brain by oxidation of histamine
AU Thomas, Boban; Prell, George D.
CS Dep. Pharmacol., Mt. Sinai Sch. Med. City Univ. New York, New York, NY, USA
SO Journal of Neurochemistry (1995), 65(2), 818-26
CODEN: JONRA9; ISSN: 0022-3042
PB Lippincott-Raven
DT Journal
LA English
AB It is generally accepted that in mammalian brain histamine is metabolized solely by histamine methyltransferase (HMT), to form tele-methylhistamine, then oxidized to tele-methylimidazoleacetic acid. However, histamine's oxidative metabolite in the periphery, imidazoleacetic acid (IAA), is also present in brain and CSF, and its levels in brain increase after inhibition of HMT. To reinvestigate if brain has the capacity to oxidize histamine and form IAA, conscious rats were injected with [3H]histamine (10 ng), either into the lateral ventricles or cisterna magna, and decapitated 30 min later. In brains of saline-treated rats, most radioactivity recovered was due to tele-methylhistamine and tele-methylimidazoleacetic acid. However, significant amts. of tritiated IAA and its metabolites, IAA-ribotide and IAA-riboside, were consistently recovered. In rats pretreated with metoprine, an inhibitor of HMT, **labeled** IAA and its metabolites usually comprised the majority of histamine's tritiated metabolites. [3H]Histamine given intracisternally produced only trace amts. of oxidative metabolites. Formation of IAA, a potent GABA-A agonist with numerous neurochem. and behavioral effects, from minute quantities of histamine in brain indicates a need for reevaluation of histamine's metabolic pathway or pathways in brain and suggests a novel mechanism for interactions between histamine and the GABAergic system.
IT **2888-19-9**, Imidazole-4-acetic acid-ribotide **29605-99-0**, Imidazoleacetic acid-riboside
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(imidazoleacetic acid formation in rat brain by histamine oxidn.)
RN 2888-19-9 CAPLUS
CN 1H-Imidazole-4-acetic acid, 1-(5-O-phosphono-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

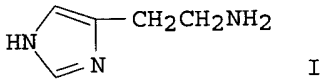


RN 29605-99-0 CAPLUS
CN 1H-Imidazole-4-acetic acid, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



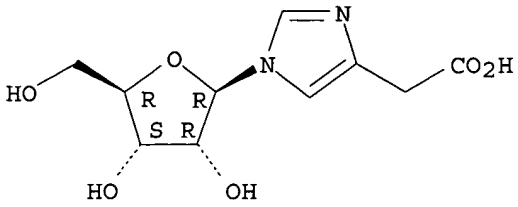
L5 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 1983:138012 CAPLUS
DN 98:138012
TI Biliar elimination of histamine and its metabolites in guinea pigs
AU Puerta, M. L.; Ballestero, M. E. M.
CS Fac. Cienc. Biol., Univ. Complutense Madrid, Madrid, Spain
SO Comp. Biochem. Physiol. C (1983), 74C(1), 111-13
CODEN: CBPCBB; ISSN: 0306-4492
DT Journal
LA English
GI



I

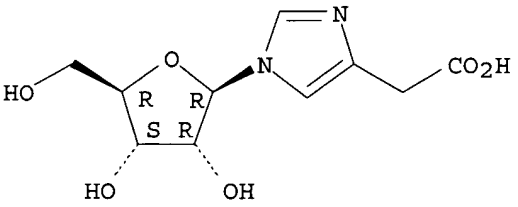
AB Administration of 14C-**labeled** histamine (I) [51-45-6] i.v. to guinea pigs resulted in 3.5% of the radioactivity being eliminated in the bile of both males and females. Free I, methylhistamine [501-75-7], methimidazoleacetic acid [2625-49-2], imidazoleacetic acid [645-65-8] and its riboside [**29605-99-0**], and acetylhistamine [673-49-4] were identified in the bile. Male bile contained more free I and methylhistamine than did female bile. Evidently, biliary elimination of I and metabolites is similar to that of urine but quant. less important.
IT **29605-99-0**
RL: BIOL (Biological study)
(as histamine metabolite, in bile)
RN 29605-99-0 CAPLUS
CN 1H-Imidazole-4-acetic acid, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 1974:115938 CAPLUS
DN 80:115938
TI Catabolism of orally administered carbon-14-**labeled** histamine in man
AU Sjaastad, Ottar; Sjaastad, O. V.
CS Inst. Surg. Res., Univ. Hosp., Oslo, Norway
SO Acta Pharmacol. Toxicol. (1974), 34(1), 33-45
CODEN: APTOA6
DT Journal
LA English
AB Within 48 hr following oral administration of 14C-**labeled** histamine-2HCl (I-2HCl) [56-92-8] (.sim.200 mg) to humans, 68-80% of the radioactivity was recovered in the urine, 1.8-18% was exhaled as 14CO2, and 13-19% was excreted in the feces. The main urinary I metabolites were imidazoleacetic acid [645-65-8] and methylimidazoleacetic acid [2625-49-2].
IT **29605-99-0**
RL: FORM (Formation, nonpreparative)
(formation of, as histamine metabolite)
RN 29605-99-0 CAPLUS
CN 1H-Imidazole-4-acetic acid, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

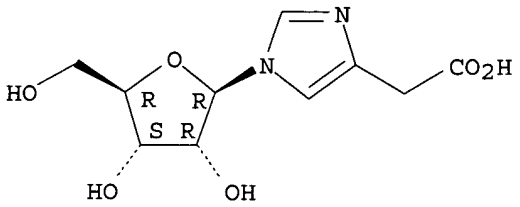
Absolute stereochemistry.



L5 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 1971:137653 CAPLUS
DN 74:137653
TI Metabolism of [14C]-histamine in domestric animals. II. Cow and sheep
AU Eliassen, K. A.
CS Dep. Physiol., Vet. Coll. Norway, Oslo, Norway
SO Acta Physiol. Scand. (1971), 81(3), 289-99
CODEN: APSCAX
DT Journal
LA English
GI For diagram(s), see printed CA Issue.
AB In cow and sheep the oxidative deamination of histamine (I) into imidazoleacetic acid and its riboside was the major metabolic pathway. About 2% of the urinary radioactivity following 14C-**labeled** I injection was due to histaminol.
IT **29605-99-0**
RL: FORM (Formation, nonpreparative)
(formation of, from histamine, by ruminants)

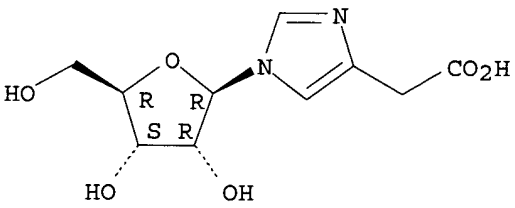
RN 29605-99-0 CAPLUS
CN 1H-Imidazole-4-acetic acid, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 1971:74587 CAPLUS
DN 74:74587
TI Uptake of [14C]-histamine by tissues of the guinea pig
AU Lewis, A. J.; Nicholls, Paul J.
CS Welsh Sch. Pharm., UWIST, Cardiff, Wales
SO J. Pharm., Pharmacol. (1971), 23(1), 66
CODEN: JPPMAB
DT Journal
LA English
GI For diagram(s), see printed CA Issue.
AB The low uptake of ring-2-14C-**labeled** histamine (I) (80 mg/kg, i.v.) by various tissues of guinea pigs showed that the animal, unlike cats and rabbits, does not posses an effective uptake system. The acidic metabolites of I, when detd. 8 hr after the administration, were identified as imidazole-4-acetic acid, 1-ribosylimidazole-4-acetic acid, and 1-methylimidazole-4-acetic acid.
IT **29605-99-0**
RL: FORM (Formation, nonpreparative)
(formation of, from histamine by animal tissue)
RN 29605-99-0 CAPLUS
CN 1H-Imidazole-4-acetic acid, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

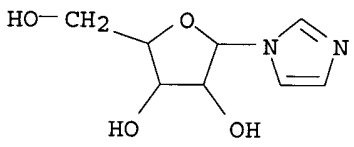
Absolute stereochemistry.



L5 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 1969:1181 CAPLUS
DN 70:1181
TI Effects of phenethyl alcohol on yeast cells
AU Burns, Victor W.; Wong, D. L.
CS Univ. of California, David, Calif., USA
SO J. Cell. Physiol. (1968), 72(2)(Pt. 1), 97-107
CODEN: JCLLAX
DT Journal
LA English
AB The physiol. effects of phenethyl alc. (I) were studied on an exponentially growing mutant of Saccharomyces cerevisiae which required

adenine, uracil, and histidine. The incorporation of 14C-**labeled** glucose into the Cl3CCO2H (TCA)-sol. fraction of the cells was markedly inhibited by 0.4%, but not by 0.3% I. The incorporation of glucose into the TCA-insol. fraction was inhibited by 0.2% I. I at 0.2% reduced the turnover rate of the histidine pool and the rate of incorporation of 14C-**labeled** histidine into protein. The uptake of 14C-**labeled** adenine into the TCA-insol. fraction, an indication of RNA synthesis, was inhibited by 0.2% I. For the effect of I on DNA synthesis, 14C-**labeled** uracil was used as a tracer, and 0.15-0.25% I caused inhibition of the uptake of uracil. Because of a genetic block in this organism, aminoimidazole ribotide (II) accumulates in the cell in the absence of adenine. I at concns. from 0.2 to 0.6% partially prevented the accumulation of II. Gross turbidity measurements showed a decrease in cell count in the presence of I. RNA synthesis was reduced to 60% of normal at 0.15% I while DNA and protein synthesis were reduced to 90% of normal. The effects of I at <0.3% were reversible. I appears to inhibit both the substrate uptake at the cell membrane and internal RNA and DNA synthesis.

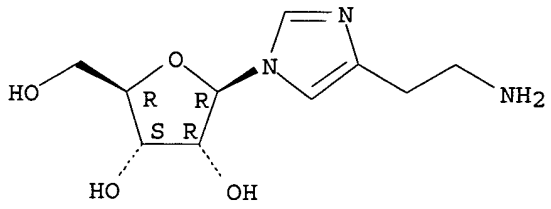
IT **27178-37-6**
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(metabolism of, phenethyl alc. effect on Escherichia coli)
RN 27178-37-6 CAPLUS
CN Imidazole, amino-1-.beta.-D-ribofuranosyl- (8CI) (CA INDEX NAME)



D1— NH_2

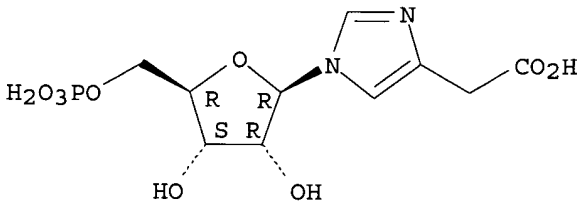
L5 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 1965:441363 CAPLUS
DN 63:41363
OREF 63:7460b-c
TI Enzymic interaction of histamine with pyridine coenzymes
AU Alivisatos, S. G. A.
CS Chicago Med. School
SO Federation Proc. (1965), Pt. 1(3), 769-73
DT Journal
LA English
AB The formation of histamine ribonucleoside after administration of **labeled** histamine was detd. in vivo. Since this compd. is most probably the in vivo degradation product of NAD, this demonstration indicates the in vivo formation of NAD. This raises the question of the potential importance of histamine-pyridine coenzyme interaction in the course of cellular metabolism in tissues rich in NADases, e.g. in the nervous tissue or during pathol. manifestation of hypersensitivity.
IT **5624-01-1**, Imidazole, 4-(2-aminoethyl)-1-.beta.-D-ribofuranosyl-
(formation by enzymes)
RN 5624-01-1 CAPLUS
CN 1H-Imidazole-4-ethanamine, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 1965:441136 CAPLUS
DN 63:41136
OREF 63:7422g-h
TI Evidence for the presence of imidazoleacetic acid riboside and ribotide in rat tissues
AU Robinson, Joseph D.; Green, Jack P.
CS School of Med., Yale Univ.
SO Federation Proc. (1965), 24(3;1), 777
DT Journal
LA English
AB A combination of ion-exchange and paper chromatography of the acid-sol. radioactive material from kidneys of rats given histamine-14 C showed the presence of imidazolcacetic acid riboside (I) and ribotide (II) and a third unidentified substance whose Rf value differed from all known metabolites of histamine. The most likely route for the synthesis of I and II would be oxidn. of histamine to imidazoleacetic acid followed by condensation of the acid with phosphoribosyl pyrophosphate, a reaction demonstrated in vitro; the I would then arise by dephosphorylation. **Labeled** histamine adenine dinucleotide and histamine adenine dinucleotide phosphate could not be detected in kidney, liver, or brain.
IT **2888-19-9**, Imidazole-4-acetic acid, 1-.beta.-D-ribofuranosyl-, 5'-phosphate
(in kidneys after histamine administration)
RN 2888-19-9 CAPLUS
CN 1H-Imidazole-4-acetic acid, 1-(5-O-phosphono-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2002 ACS
AN 1964:486555 CAPLUS
DN 61:86555
OREF 61:15113g-h
TI Presence of imidazoleacetic acid riboside and ribotide in rat tissues
AU Robinson, J. D.; Green, J. P.
CS Yale Univ., School of Med., New Haven, CT
SO Nature (1964), 203(4950), 1178-9
DT Journal
LA Unavailable
AB In rats given multiple injections of **labeled** histamine (I), chromatography of trichloroacetic acid (TCA) exts. of kidney revealed 3 major radioactive fractions. These were imidazoleacetic acid riboside (II), imidazoleacetic acid ribotide (III) and an unidentified fraction not

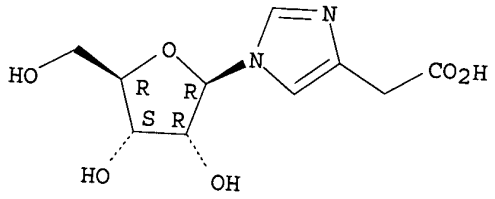
coinciding with any of the urinary I metabolites. In brain, after injection of **labeled** histidine (IV), chromatography of TCA exts. revealed small fractions of total tissue radioactivity in II, III, I and imidazoleacetic acid, higher levels in unidentified metabolites, and at least 80% as IV. Radioactivity from injected I or IV was not incorporated into histamine adenine dinucleotide (HAD) or HAD phosphate in rat or guinea pig organs.

IT **29605-99-0**, Imidazole-4-acetic acid, 1-ribosyl-
(in brain and kidneys after administration of histamine and histidine)

RN 29605-99-0 CAPLUS

CN 1H-Imidazole-4-acetic acid, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2002 ACS

AN 1964:456802 CAPLUS

DN 61:56802

OREF 61:9880f-h,9881a

TI Increased turnover of phosphoribosylpyrophosphate, a purine nucleotide precursor, in certain gouty subjects

AU Wyngaarden, J. B.; Jones, O. W.; Ashton, D. M.

SO Atti Congr. Lega Intern. Reumatismo, 10.degree., Rome (1961), 1, 249-53

DT Journal

LA English

AB Since phosphoribosylpyrophosphate (I) is an obligatory precursor of purine nucleotides, its turnover has been investigated in gouty subjects. The hyperuricemia of gout may be due to overproduction or underexcretion of uric acid, or both. Orally administered imidazoleacetic acid (II) is partially excreted in urine as the imidazoleacetic acid ribonucleotide (III), and if glucose-14C is given simultaneously the ribose moiety is **labeled**. It is assumed that the same "pool" of I is involved both in the production of III and of phosphoribosylamine (the 1st specific precursor of purine nucleotides). Subjects were all males. Five controls had no gout or renal disease personally, or in the family history. Five gouty patients varied from asymptomatic hyperuricemia to advanced chronic tophaceous gout. All were given 25 .mu.c. glucose-U-14C and 20 micromoles/kg. II. Urine was collected in 5 ml. of concd. HCl, either in 2-hr. aliquots, or in a single 10-hr. sample, and stored at 4.degree.. CO2 was then removed by aeration, the pH adjusted to 8, the III collected on a Dowex-1 (acetate) column, and purified on a Dowex-50 (H+) column. The product in M citrate, pH 6.0, was hydrolyzed with a bacterial riboside hydrolase, and the protein-free filtrate passed through a mixed-bed resin (MB-3, Fisher), and the eluate analyzed for 14C and ribose (orcinol). Uric acid was detd. by differential spectrophotometry using uricase. In the controls, 0.010-0.047% 14C was incorporated into urinary III in 10 hours. For 2 gouty subjects with low and normal uric acid excretions, the corresponding figures were 0.009 and 0.058%, and for 3 gouty hyperuricemic subjects the range was 0.1640.309%. In these latter 3 subjects, the sp. activity (counts/ min./mg.) of the ribose moiety of III was approx. 8 times that of the controls. If urine were collected in 2-hr. aliquots, the max. sp. activity occurred about 2 hrs. earlier in all gouty subjects than in controls, and the peak values for the 3 hyperexcretors were 2-4-fold greater than controls. There was an increased I turnover in the

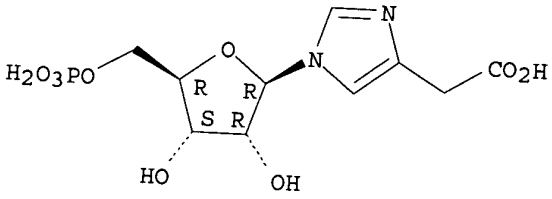
3 hyperexcretor gouty subjects, but there may be a continuous gradation in the magnitude of purine synthesis in man.

IT **2888-19-9**, Imidazole-4-acetic acid, 1-.beta.-D-ribofuranosyl-, 5'-phosphate
(in urine in gout)

RN 2888-19-9 CAPLUS

CN 1H-Imidazole-4-acetic acid, 1-(5-O-phosphono-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2002 ACS

AN 1963:470932 CAPLUS

DN 59:70932

OREF 59:13187f-g

TI In vivo degradation of histamine-adenine dinucleotide phosphate to histamine ribonucleoside

AU Alivisatos, S. G. A.; Abdel-Latif, A. A.; Ungar, F.; Mourkides, G. A.

CS Illinois Inst. of Technol., Chicago

SO Nature (1963), 199(4896), 907-8

DT Journal

LA Unavailable

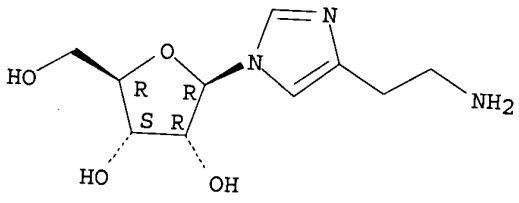
AB Mice were injected intraperitoneally with a histamine-adenine dinucleotide phosphate. The histamine was **labeled** with C14 at C-2. The only radioactive excretion in the urine of mice was identified as histamine ribonucleoside.

IT **5624-01-1**, Imidazole, 4-(2-aminoethyl)-1-.beta.-D-ribofuranosyl-
(formation from histamine-adenine dinucleotide phosphate in vivo)

RN 5624-01-1 CAPLUS

CN 1H-Imidazole-4-ethanamine, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2002 ACS

AN 1962:74743 CAPLUS

DN 56:74743

OREF 56:14584b-d

TI The catabolism of tissue nucleic acid. III. The catabolism of ribonucleic acid after total-body x-irradiation

AU Gerber, Georg B.; Gerber, Gisela; Altman, Kurt I.

CS Univ. of Rochester, Rochester, NY

SO Intern. J. Radiation Biol. (1961), 4, 67-73

DT Journal

LA Unavailable

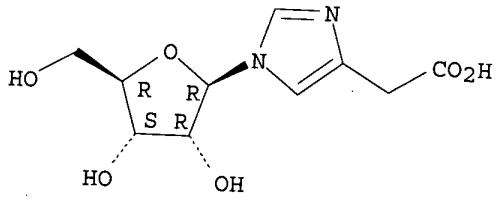
AB cf. CA 54, 25159h. The effect of total-body x-irradiation on ribonucleic acid (RNA) catabolism was studied in rats whose RNA had been **labeled** by injection of glucose-U-C14 three days previously. The sp. activity of urinary ribosyl imidazole acetate (I) as well as of RNA of liver, intestine, muscle, spleen and thymus was detd. after x- or sham-irradiation. Rats were either pair fed or starved after irradiation. After 1000 r. the sp. activity of I was increased whereas that of intestinal and muscle RNA was decreased with little change in liver RNA. In pair-fed animals, exposure to 756 r. decreased the sp. activity of spleen and thymus RNA, and gave a steady decrease in that of I over 5 days. Sp. activity of liver RNA was diminished in the sham-irradiated rats and was equiv. to that of I which was excreted on the first day after treatment. It was concluded that radiation-induced increase in RNA catabolism is present mainly in intestine and muscle on the second and third day after exposure whereas starvation-induced increase in catabolism occurs primarily in the liver and on the first day of starvation.

IT **29605-99-0**, Imidazole-4-acetic acid, 1-ribosyl-
(in urine after x-ray irradiation)

RN 29605-99-0 CAPLUS

CN 1H-Imidazole-4-acetic acid, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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FILE 'HOME' ENTERED AT 06:49:39 ON 25 SEP 2002

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COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 06:49:47 ON 25 SEP 2002
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DICTIONARY FILE UPDATES: 23 SEP 2002 HIGHEST RN 454421-17-1

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http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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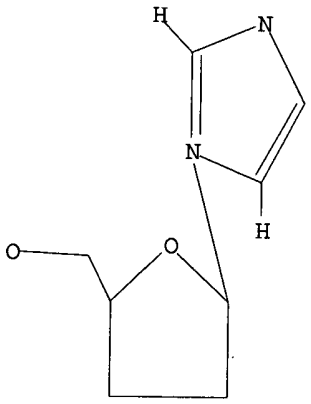
L1 STR



Structure attributes must be viewed using STN Express query preparation.

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FULL SCREEN SEARCH COMPLETED - 99169 TO ITERATE

100.0% PROCESSED 99169 ITERATIONS 7 ANSWERS
SEARCH TIME: 00.00.03

L2 7 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	140.28	140.49

FILE 'CAPLUS' ENTERED AT 06:50:17 ON 25 SEP 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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=> s l2
L3 3 L2

=> d l3 bib abs hitstr 1-3

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 2000:669931 CAPLUS
DN 134:5110
TI Contribution of the Adenine Base to the Activity of Adenophostin A Investigated Using a Base Replacement Strategy
AU Marwood, Rachel D.; Jenkins, David J.; Correa, Vanessa; Taylor, Colin W.; Potter, Barry V. L.
CS Wolfson Laboratory of Medicinal Chemistry Department of Pharmacy and Pharmacology, University of Bath, Bath, BA2 7AY, UK
SO Journal of Medicinal Chemistry (2000), 43(22), 4278-4287
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English
AB Syntheses of 3'-O-.alpha.-D-glucopyranosyl-1-.beta.-D-ribofuranosidoimidazole 2',3'',4''-trisphosphate (I) and 3'-O-.alpha.-D-glucopyranosyl-9-.beta.-D-ribofuranosidopurine 2',3'',4''-trisphosphate (II), two analogs of the superpotent 1D-myo-inositol 1,4,5-trisphosphate receptor agonist adenophostin A (III), are described. 5-O-Benzyl-1,2-O-isopropylidene-.alpha.-D-ribofuranose was prepd. by an improved route from 1,2-O-isopropylidene-.alpha.-D-

xylofuranose and was coupled with 3,4-di-O-acetyl-2,6-di-O-benzyl-D-glucopyranosyl di-Me phosphite to give 3',4'-di-O-acetyl-2',5,6'-tri-O-benzyl-3-O-.alpha.-D-glucopyranosyl-1,2-O-isopropylidene-.alpha.-D-ribofuranose. Removal of the isopropylidene acetal and subsequent acetylation gave the central disaccharide 1,2,3',4'-tetra-O-acetyl-2',5,6'-tri-O-benzyl-3-O-.alpha.-D-glucopyranosyl-D-ribofuranose. Vorbuggen condensation with activated imidazole or purine gave the required .beta.-substituted derivs. which were further elaborated to I and II, resp. Radioligand binding assays to hepatic InsP3 receptors and functional assays of Ca2+ release from permeabilized hepatocytes gave a rank order of potency of the ligands III .apprxeq. II > I .apprxeq. Ins(1,4,5)P3 indicating that the N6-amino group of III is of little importance for activity and that a min. of a two-fused-ring nucleobase is required for activity to exceed that of Ins(1,4,5)P3. The role of the adenine base in the activity of the adenophostins is discussed. This general method should facilitate ready access to nucleobase-modified adenophostin analogs for SAR studies.

IT **308290-83-7P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

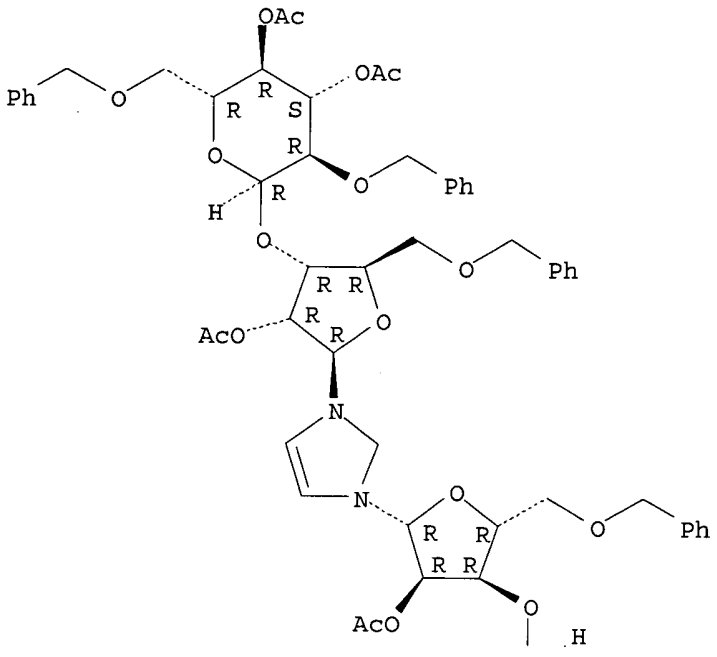
(prepn. and membrane binding structure activity relationships of Adenophostin A via a coupling reaction)

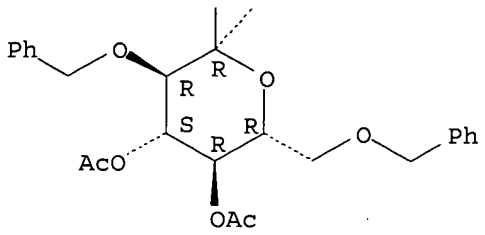
RN 308290-83-7 CAPLUS

CN 1H-Imidazolium, 1,3-bis[2-O-acetyl-3-O-[3,4-di-O-acetyl-2,6-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-5-O-(phenylmethyl)-.beta.-D-ribofuranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

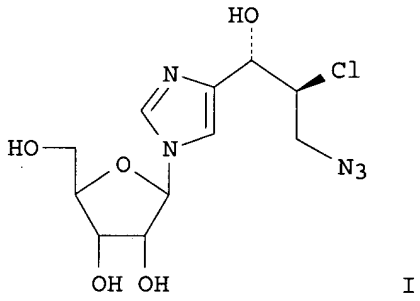
PAGE 1-A





*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1996:762145 CAPLUS
DN 126:144489
TI New C2 symmetrical and semi-symmetrical substituted imidazolium ribonucleoside. Imidazolic nucleosides analogs
AU Mourabit, A. Al; Beckmann, M.; Poupat, C.; Ahond, A.; Potier, P.
CS Institut de Chimie des Substances Naturelles du C.N.R.S., Gif-sur-Yvette, 91198, Fr.
SO Tetrahedron: Asymmetry (1996), 7(12), 3455-3464
CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier
DT Journal
LA English
GI



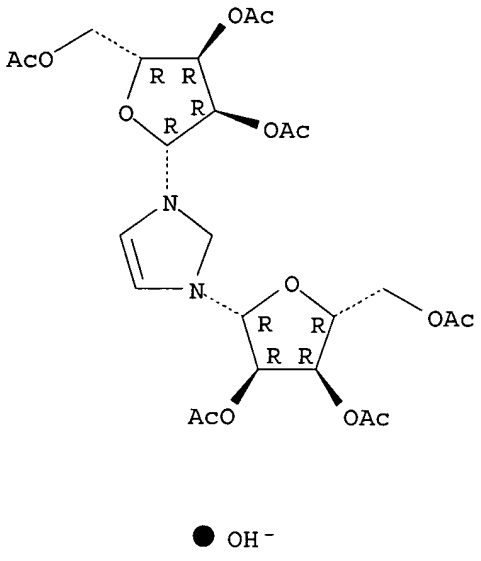
I

AB New C2 sym. imidazolium nucleosides, e.g. I, have been synthesized using silyl Hilbert Johnson-Vorbrugen method and coupling of trimethylsilylimidazole with the peracylated D-ribofuranose. The was used. These new base modified nucleosides were devoid of activity against HIV and cytotoxicity.

IT **186648-75-9P 186648-80-6P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of C2 sym. and semi-sym. substituted imidazolium ribonucleosides as virucides)

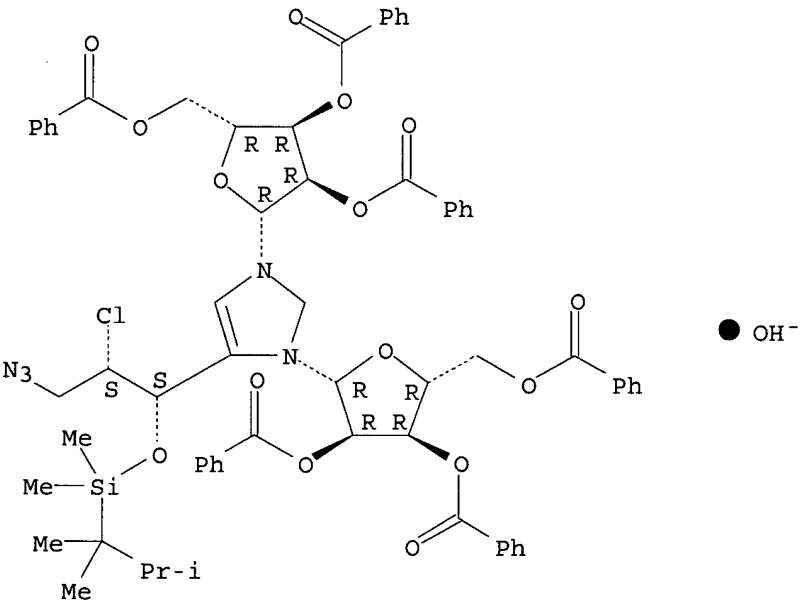
RN 186648-75-9 CAPLUS
CN 1H-Imidazolium, 1,3-bis(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)-, hydroxide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



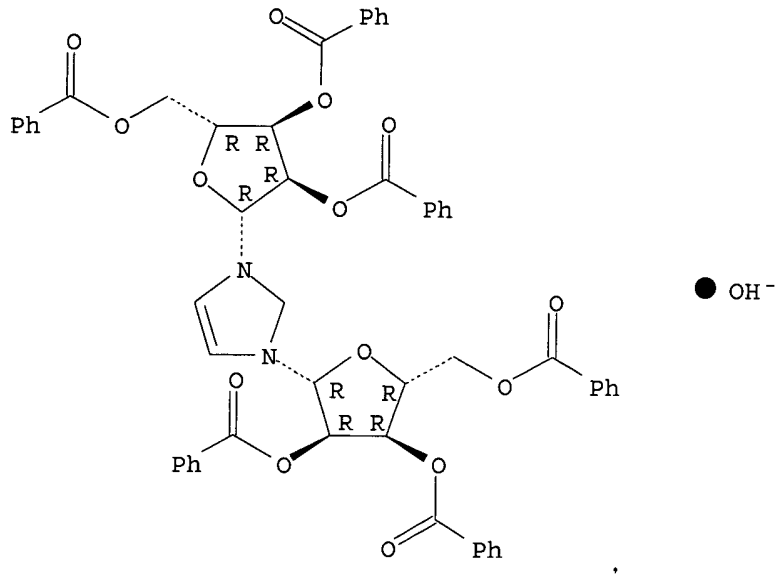
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 186648-80-6 CAPLUS
CN 1H-Imidazolium, 4-[(1S,2S)-3-azido-2-chloro-1-[[dimethyl(1,1,2-trimethylpropyl)silyl]oxy]propyl]-1,3-bis(2,3,5-tri-O-benzoyl-.beta.-D-ribofuranosyl)-, hydroxide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



*** FRAGMENT DIAGRAM IS INCOMPLETE ***
IT **186648-73-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of C2 sym. and semi-sym. substituted imidazolium ribonucleosides as virucides)
RN 186648-73-7 CAPLUS
CN 1H-Imidazolium, 1,3-bis(2,3,5-tri-O-benzoyl-.beta.-D-ribofuranosyl)-, hydroxide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



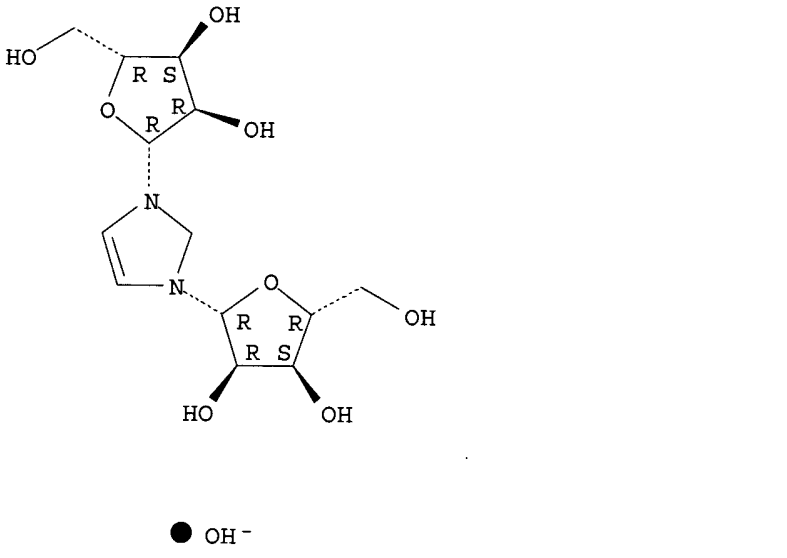
*** FRAGMENT DIAGRAM IS INCOMPLETE ***

IT **186648-77-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of C2 sym. and semi-sym. substituted imidazolium ribonucleosides as virucides)

RN 186648-77-1 CAPLUS

CN 1H-Imidazolium, 1,3-di-.beta.-D-ribofuranosyl-, hydroxide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

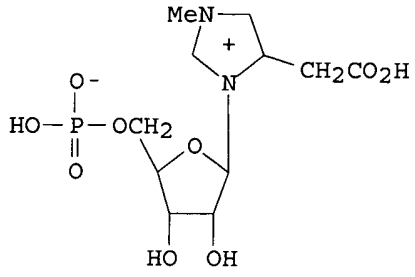
L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS

AN 1992:470204 CAPLUS

DN 117:70204

TI Nucleosides. 163. Synthesis of ribosides and ribotides of imidazole-4(5)-acetic acid and 1-methylimidazole-4(5)-acetic acid

AU Matulic-Adamic, Jasenka; Watanabe, Kyoichi A.
CS Lab. Org. Chem., Sloan-Kettering Inst. Cancer Res., New York, NY, 10021, USA
SO Korean J. Med. Chem. (1991), 1(1), 54-64
CODEN: KJMCE7
DT Journal
LA English
OS CASREACT 117:70204
GI



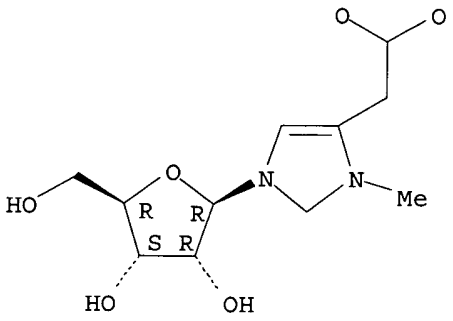
I

AB Nucleotide imidazoleacetic acid, e.g. I, were prepd. from imidazole-4(5)-acetonitrile (II). Regioselective tritylation of II followed by N-methylation with Me2S and hydrolysis gave 1-methylimidazole-5-acetic acid.

IT **142527-55-7P 142606-76-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

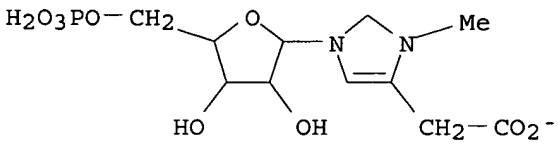
RN 142527-55-7 CAPLUS
CN 1H-Imidazolium, 4-(carboxymethyl)-3-methyl-1-.beta.-D-ribofuranosyl-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

RN 142606-76-6 CAPLUS
CN 1H-Imidazolium, 4-(carboxymethyl)-3-methyl-1-(5-O-phosphono-.beta.-D-ribofuranosyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)



● Na

*** FRAGMENT DIAGRAM IS INCOMPLETE ***

=>

FILE 'HOME' ENTERED AT 15:40:21 ON 24 SEP 2002

=> file reg
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 15:40:38 ON 24 SEP 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 SEP 2002 HIGHEST RN 454421-17-1
DICTIONARY FILE UPDATES: 23 SEP 2002 HIGHEST RN 454421-17-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

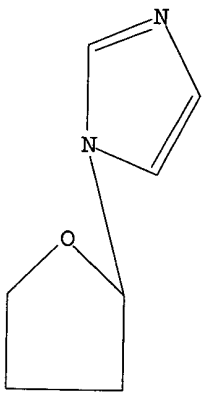
Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

*** YOU HAVE NEW MAIL ***

=>
Uploading 09880727.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 full
FULL SEARCH INITIATED 15:41:09 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 108494 TO ITERATE

100.0% PROCESSED 108494 ITERATIONS 104846 ANSWERS
SEARCH TIME: 00.00.04

L2 104846 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	140.28	140.49

FILE 'CAPLUS' ENTERED AT 15:41:18 ON 24 SEP 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 24 Sep 2002 VOL 137 ISS 13
FILE LAST UPDATED: 23 Sep 2002 (20020923/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> s l2
L3 259099 L2

=> s l3 and label
48825 LABEL
L4 2754 L3 AND LABEL

=> s l4 and coupled label?
234873 COUPLED
374492 LABEL?
4 COUPLED LABEL?
(COUPLED(W)LABEL?)
L5 0 L4 AND COUPLED LABEL?

=> d l4 bib abs hitstr 1, 200, 2754

L4 ANSWER 1 OF 2754 CAPLUS COPYRIGHT 2002 ACS
AN 2002:688459 CAPLUS
DN 137:180760
TI DNA sequencing using multiple fluorescent labels being distinguishable by their decay times
IN Jensen, Morten; Parce, J. Wallace
PA Caliper Technologies Corp., USA
SO U.S., 18 pp., Cont.-in-part of U.S. Ser. No. 132,191, abandoned.
CODEN: USXXAM

DT Patent
LA English
FAN.CNT 2

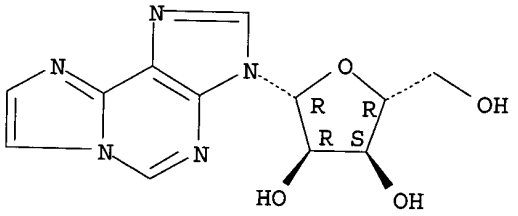
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6447724	B1	20020910	US 1998-213297	19981215
	WO 2000009753	A1	20000224	WO 1999-US18294	19990811
	W: AU, CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9954795	A1	20000306	AU 1999-54795	19990811
	EP 1104491	A1	20010606	EP 1999-941073	19990811
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1998-132191	B2	19980811		
	US 1998-122064P	P	19980811		
	US 1998-132181	A	19980811		
	US 1998-132554	A	19980811		
	US 1998-213297	A	19981215		
	WO 1999-US18294	W	19990811		

AB A method is provided for identifying components of a mixt. by labeling the individual components with fluorescent agents having different fluorescence lifetimes. The components are subsequently sepd., fluorescent labels detected and their lifetimes measured. Based on the measured fluorescent lifetimes, the components of mixts. of small org. mols., polymers, peptides, saccharides and nucleic acids can be identified.

IT **39007-51-7**, Ethenoadenosine
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DNA sequencing using multiple fluorescent labels being distinguishable by their decay times)

RN 39007-51-7 CAPLUS
CN 3H-Imidazo[2,1-i]purine, 3-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 200 OF 2754 CAPLUS COPYRIGHT 2002 ACS
AN 2000:402045 CAPLUS
DN 133:40226
TI Targeted molecular bar codes and methods for using the same
IN Akeson, Mark; Deamer, David W.; Vercoutere, Wenonah; Olsen, Hugh E.; Braslau, Rebecca; Singaram, Bakthan; Steiner, Derek; Cappuccio, Frank
PA The Regents of the University of California, USA
SO PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 2000034527 A2 20000615 WO 1999-US30598 19991210
WO 2000034527 A3 20001012
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRAI US 1998-111802P P 19981211
US 1999-158020P P 19991006

AB Targeted mol. bar codes and methods for using the same are provided. The subject targeted mol. bar codes include a mol. bar code and a member of a specific binding pair, where the specific binding pair member is generally bonded to the bar code through a linking group. The subject mol. bar code may be read during translocation through a single nano-meter scale pore. The subject targeted mol. bar codes find use in a variety of different applications involving analyte detection, such as screening and diagnostic applications. A targeted bar code composed of poly dT18 linked by a disulfide bond to a 50 base-long antisense segment of N-ras Exon 1 was synthesized and used to detect N-ras in a mixt. The target oligonucleotides were attached to polystyrene beads. Following hybridization and recovery and washing of the bound bar code, the disulfide linkage was cleaved, the beads were spun down, and the bar code-contg. supernatant was added to an .alpha.-hemolysin nanopore miniature device for detection.

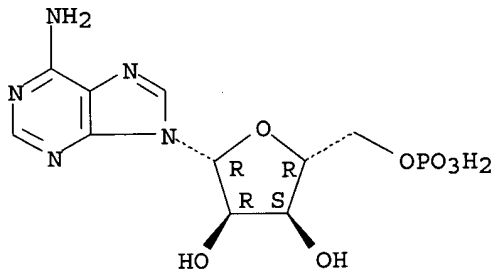
IT **24937-83-5**, Polyadenylic acid
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); ANST (Analytical study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(in prepn. of mol. bar codes; targeted mol. bar codes and methods for using same)

RN 24937-83-5 CAPLUS
CN 5'-Adenylic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 61-19-8
CMF C10 H14 N5 O7 P

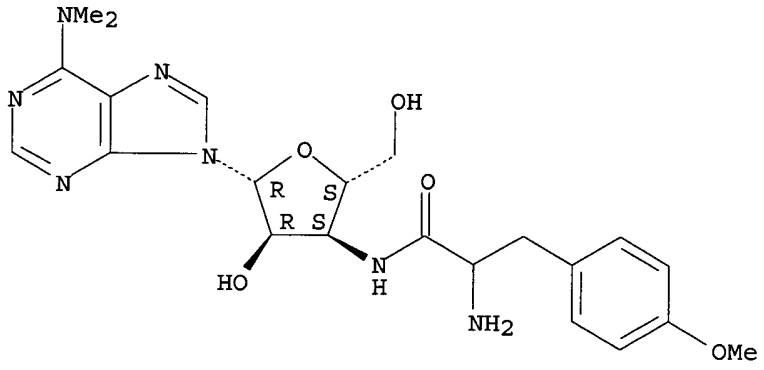
Absolute stereochemistry.



L4 ANSWER 2754 OF 2754 CAPLUS COPYRIGHT 2002 ACS
AN 1962:14648 CAPLUS
DN 56:14648
OREF 56:2772i,2773a-b
TI The effect of puromycin on protein metabolism and cell division in fertilized sea urchin eggs
AU Hultin, T.

CS WennerGren Inst., Stockholm
SO Experientia (1961), 17, 410-11
DT Journal
LA English
AB Puromycin introduced into sea urchin eggs just before fertilization at concns. above 10-4M halts division at the "clear streak" stage. A correlation was sought between this effect and the inhibitory action of puromycin on the incorporation of labeled amino acids into protein in the eggs. L-Valine-C14 was used as the **label**. The inhibition of division in labeled whole eggs varied with the concn. of puromycin. At a concn. of 10-4M, 50% stopped at the "clear streak" stage, while at 10-5M 40% reached a 4-cell stage. The cell-free incorporation system showed a greater sensitivity to puromycin. The mitotic block is probably a direct effect of impaired protein metabolism.
IT **5682-30-4**, Adenosine, 3'-(.alpha.-amino-p-methoxyhydrocinnamamido)-3'-deoxy-N,N-dimethyl-
(effect on cell division and protein metabolism in sea urchin ova)
RN 5682-30-4 CAPLUS
CN Adenosine, 3'-[[2-amino-3-(4-methoxyphenyl)-1-oxopropyl]amino]-3'-deoxy-N,N-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d his

(FILE 'HOME' ENTERED AT 15:40:21 ON 24 SEP 2002)

FILE 'REGISTRY' ENTERED AT 15:40:38 ON 24 SEP 2002
L1 STRUCTURE UPLOADED
L2 104846 S L1 FULL

FILE 'CAPLUS' ENTERED AT 15:41:18 ON 24 SEP 2002
L3 259099 S L2
L4 2754 S L3 AND LABEL
L5 0 S L4 AND COUPLED LABEL?

=> s l4 and imidazole
42254 IMIDAZOLE
L6 23 L4 AND IMIDAZOLE

=> d l6 bib abs hitstr 1-23

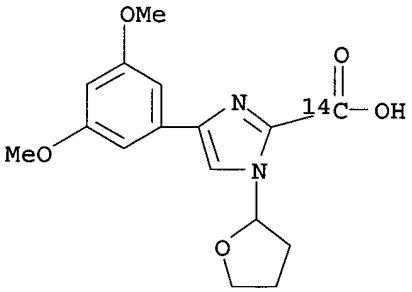
L6 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 2000:748405 CAPLUS
DN 134:42020
TI Carbon-14 labeling of a potential new immunoregulant agent
AU Egan, M. A. McEvoy; Dean, D. C.; Marks, T. M.; Song, Zhiguo; Melillo, D.

G.
CS Merck Research Laboratories, Rahway, NJ, 07065, USA
SO Journal of Labelled Compounds & Radiopharmaceuticals (2000), 43(11), 1095-1105
CODEN: JLCRD4; ISSN: 0362-4803
PB John Wiley & Sons Ltd.
DT Journal
LA English
OS CASREACT 134:42020
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

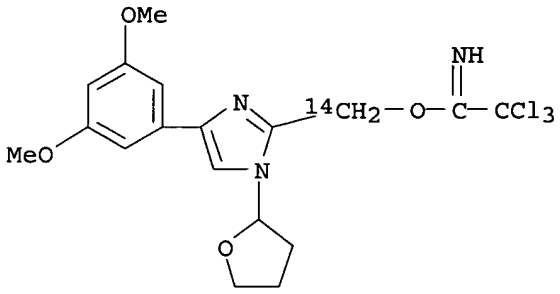
AB A carbon-14 labeled version of the ascomycin analog I, a potential new immunosuppressant agent, was synthesized for utilization in animal and human drug metab. studies. In order to place the carbon-14 **label** at a metabolically stable position, it was necessary to modify the established synthesis of a key intermediate. [14C]-I is prepd. by a highly chemoselective alkylation of ascomycin at the C-32 hydroxy position with a carbon-14 labeled imidazolyl trichloroimidate side chain II. Carbon-14 was efficiently incorporated in II through carboxylation of an **imidazole** C-2 lithiate with [14C]carbon dioxide.

IT **312583-35-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(carbon-14 labeling of ascomycin as a potential new immunoregulant agent ascomycin)
RN 312583-35-0 CAPLUS
CN 1H-Imidazole-2-carboxylic-14C acid, 4-(3,5-dimethoxyphenyl)-1-(tetrahydro-2-furanyl)-, lithium salt (9CI) (CA INDEX NAME)

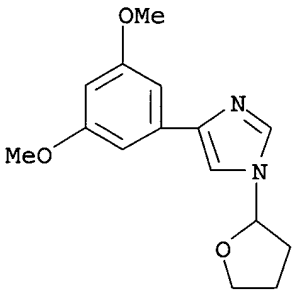


● Li

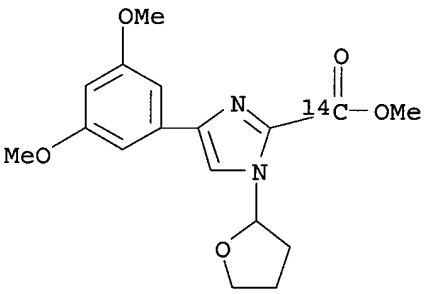
IT **312583-34-9P 312583-36-1P 312583-38-3P**
312583-39-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(carbon-14 labeling of ascomycin as a potential new immunoregulant agent ascomycin)
RN 312583-34-9 CAPLUS
CN Ethanimidic acid, 2,2,2-trichloro-, [4-(3,5-dimethoxyphenyl)-1-(tetrahydro-2-furanyl)-1H-imidazol-2-yl]methyl-14C ester (9CI) (CA INDEX NAME)



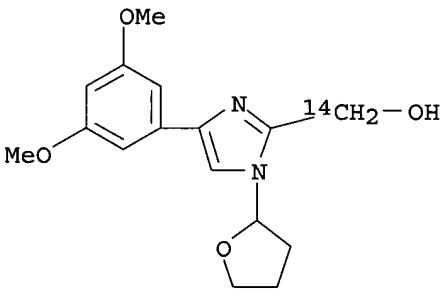
RN 312583-36-1 CAPLUS
CN 1H-Imidazole, 4-(3,5-dimethoxyphenyl)-1-(tetrahydro-2-furanyl)- (9CI) (CA INDEX NAME)



RN 312583-38-3 CAPLUS
CN 1H-Imidazole-2-carboxylic-14C acid, 4-(3,5-dimethoxyphenyl)-1-(tetrahydro-2-furanyl)-, methyl ester (9CI) (CA INDEX NAME)



RN 312583-39-4 CAPLUS
CN 1H-Imidazole-2-methanol-.alpha.-14C, 4-(3,5-dimethoxyphenyl)-1-(tetrahydro-2-furanyl)- (9CI) (CA INDEX NAME)

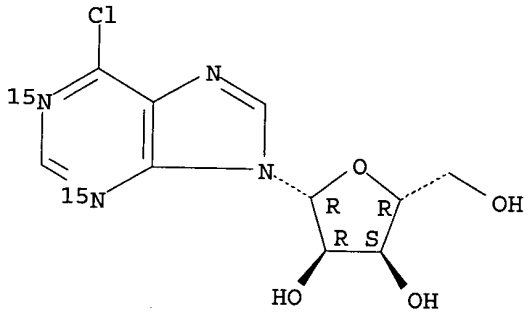


RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

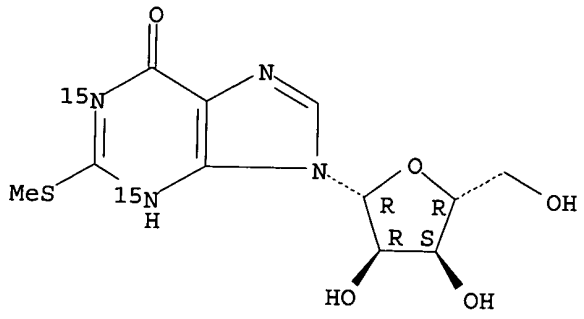
L6 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1999:491591 CAPLUS
DN 131:257779
TI 15N-Multi-labeled Adenine and Guanine Nucleosides. Syntheses of [1,3,NH2-15N3]- and [2-13C-1,3,NH2-15N3]-Labeled Adenosine, Guanosine, 2'-Deoxyadenosine, and 2'-Deoxyguanosine
AU Abad, Jose-Luis; Gaffney, Barbara L.; Jones, Roger A.
CS Department of Chemistry, Rutgers The State University of New Jersey, Piscataway, NJ, 08854, USA
SO Journal of Organic Chemistry (1999), 64(18), 6575-6582
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
AB The authors report a high-yield route to the following specifically 15N- and 13C-multi-labeled nucleosides: [1,3,NH2-15N3]- and [2-13C-1,3,NH2-15N3]-adenosine; [1,3,NH2-15N3]- and [2-13C-1,3,NH2-15N3]-guanosine; [1,3,NH2-15N3]- and [2-13C-1,3,NH2-15N3]-2'-deoxyadenosine; [1,3,NH2-15N3]- and [2-13C-1,3,NH2-15N3]-2'-deoxyguanosine. In each set, the 13C2 atom functions as a "tag" that allows the 15N1 and 15N3 atoms to be unambiguously differentiated from the untagged versions in 15N NMR of RNA or DNA fragments. The key intermediate of this synthetic strategy for both the adenine and guanine nucleosides is [NH2,CONH2-15N2]-5-amino-4-imidazolecarboxamide. The [2-13C]-**label** is added through a ring closure using [13C]-sodium Et xanthate (NaS13CSOEt). Enzymic transglycosylation of either multi-labeled 6-chloropurine or multi-labeled 2-mercaptohypoxanthine and a final reaction with 15NH3 give the adenine and guanine nucleosides. This is the first report of a [3-15N]-labeled guanine nucleoside.
IT **244769-65-1P 244769-69-5P 244769-73-1P**
244769-74-2P 244769-75-3P 244769-81-1P
244769-82-2P 244769-83-3P
RL: BPN (Biosynthetic preparation); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(syntheses of [15N3]- and [13C,15N3]-labeled adenosine, guanosine, deoxyadenosine, and deoxyguanosine nucleosides)
RN 244769-65-1 CAPLUS
CN 9H-Purine-1,3-15N2, 6-chloro-9-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



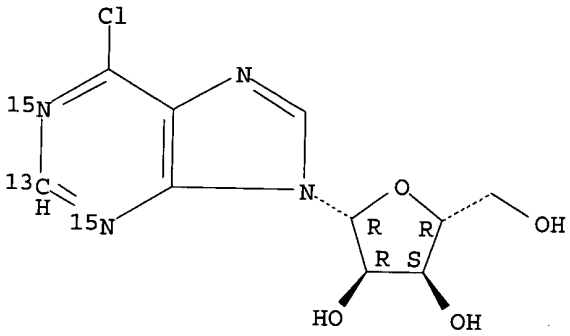
RN 244769-69-5 CAPLUS
CN Xanthosine-1,3-15N2, 2-S-methyl-2-thio- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



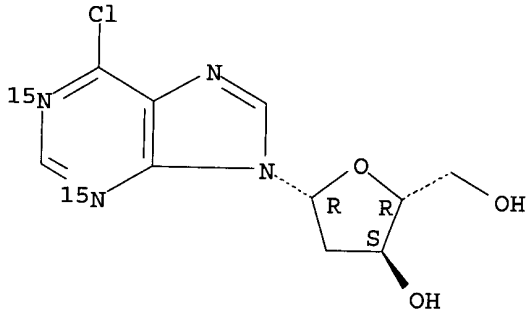
RN 244769-73-1 CAPLUS
CN 9H-Purine-2-13C-1,3-15N2, 6-chloro-9-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



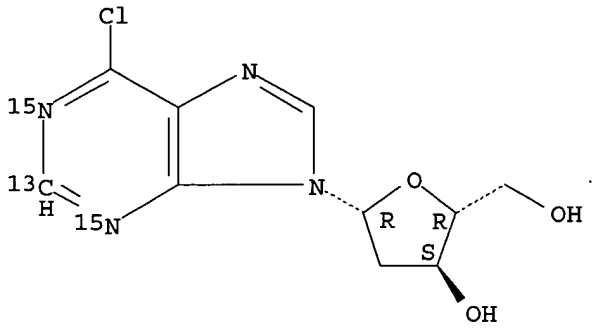
RN 244769-74-2 CAPLUS
CN 9H-Purine-1,3-15N2, 6-chloro-9-(2-deoxy-.beta.-D-erythro-pentofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



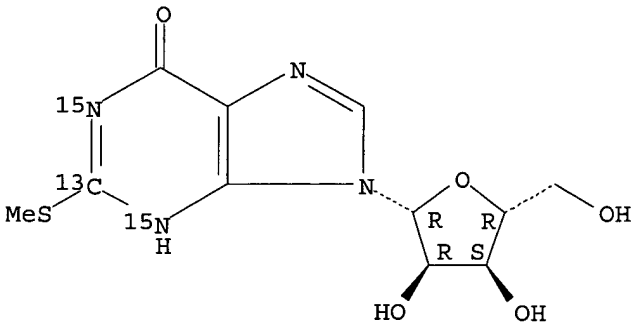
RN 244769-75-3 CAPLUS
CN 9H-Purine-2-13C-1,3-15N2, 6-chloro-9-(2-deoxy-.beta.-D-erythro-pentofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



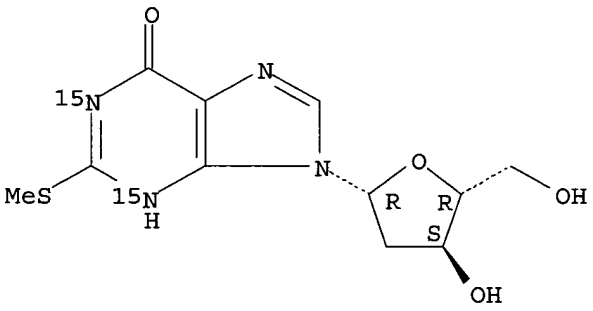
RN 244769-81-1 CAPLUS
CN Xanthosine-2-13C-1,3-15N2, 2-S-methyl-2-thio- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



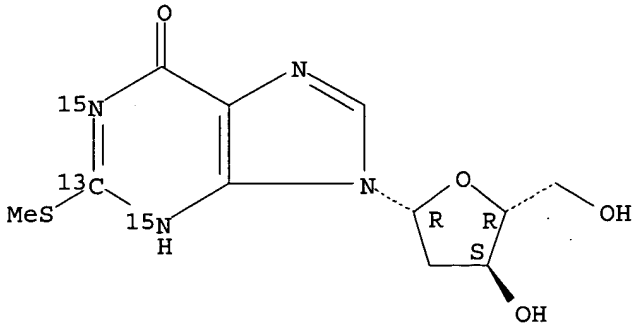
RN 244769-82-2 CAPLUS
CN Xanthosine-1,3-15N2, 2'-deoxy-2-S-methyl-2-thio- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



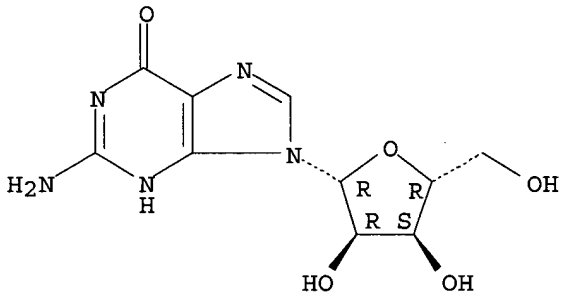
RN 244769-83-3 CAPLUS
CN Xanthosine-2-13C-1,3-15N2, 2'-deoxy-2-S-methyl-2-thio- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



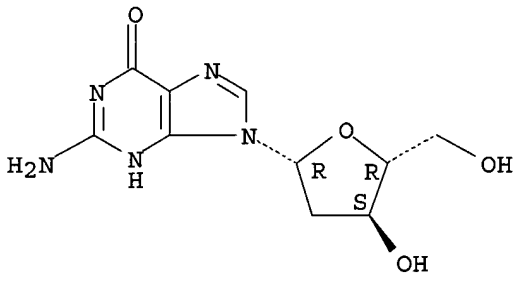
IT **118-00-3**, Guanosine, reactions **961-07-9**,
2'-Deoxyguanosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(syntheses of [15N3]- and [13C,15N3]-labeled adenosine, guanosine, deoxyadenosine, and deoxyguanosine nucleosides)
RN 118-00-3 CAPLUS
CN Guanosine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



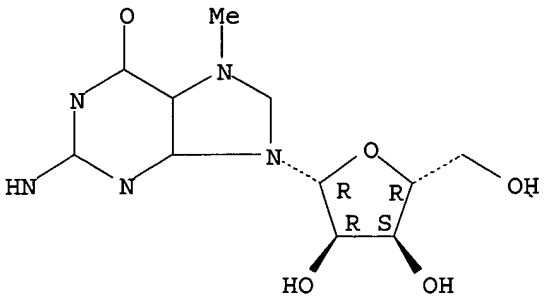
RN 961-07-9 CAPLUS
CN Guanosine, 2'-deoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



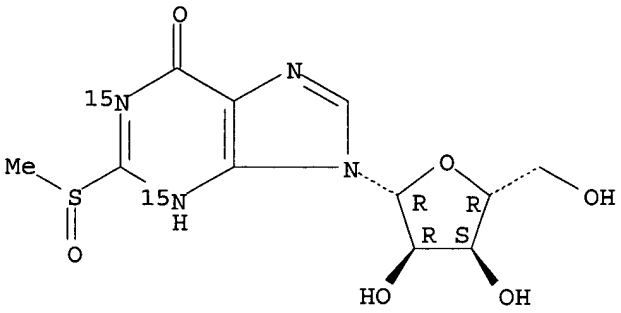
IT **20244-86-4P**, 7-Methylguanosine **244769-70-8P**
244769-84-4P 244769-85-5P 244769-86-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(syntheses of [15N3]- and [13C,15N3]-labeled adenosine, guanosine, deoxyadenosine, and deoxyguanosine nucleosides)
RN 20244-86-4 CAPLUS
CN 1H-Purinium, 2-amino-6,9-dihydro-7-methyl-6-oxo-9-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



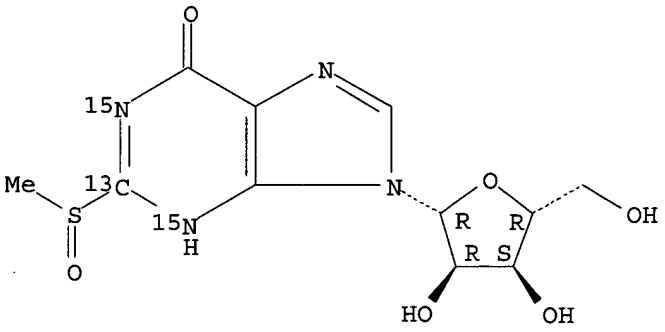
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 244769-70-8 CAPLUS
CN Inosine-1,3-15N2, 2-(methylsulfinyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



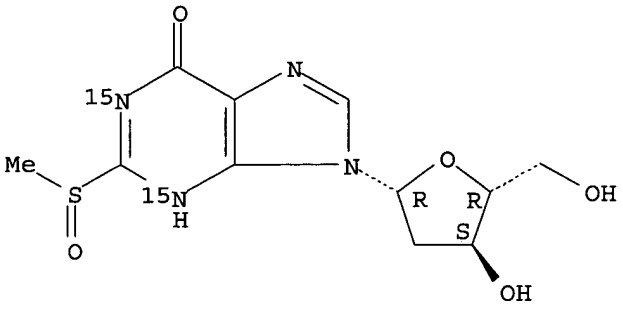
RN 244769-84-4 CAPLUS
CN Inosine-2-13C-1,3-15N2, 2-(methylsulfinyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



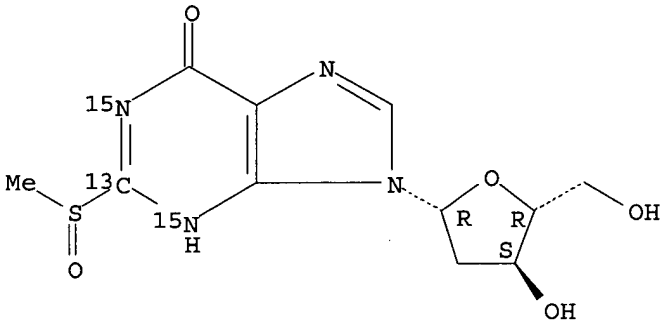
RN 244769-85-5 CAPLUS
CN Inosine-1,3-15N2, 2'-deoxy-2-(methylsulfinyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



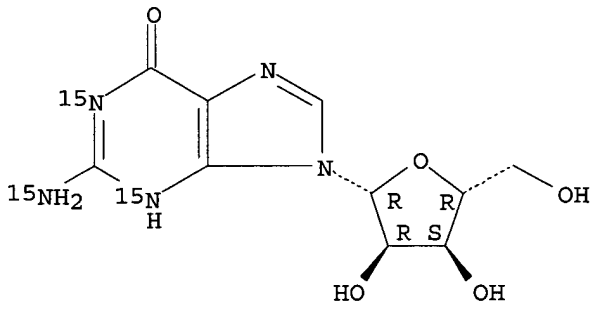
RN 244769-86-6 CAPLUS
CN Inosine-2-13C-1,3-15N2, 2'-deoxy-2-(methylsulfinyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



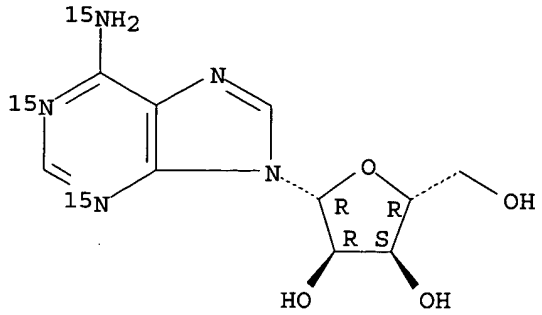
IT **71856-35-4P**, Guanosine-N,1,3-15N3 **244769-66-2P**, Adenosine-N,1,3-15N3 **244769-76-4P**, Adenosine-2-13C-N,1,3-15N3 **244769-77-5P 244769-78-6P 244769-87-7P**, Guanosine-2-13C-N,1,3-15N3 **244769-88-8P 244769-89-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(syntheses of [15N3]- and [13C,15N3]-labeled adenosine, guanosine, deoxyadenosine, and deoxyguanosine nucleosides)
RN 71856-35-4 CAPLUS
CN Guanosine-N,1,3-15N3 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



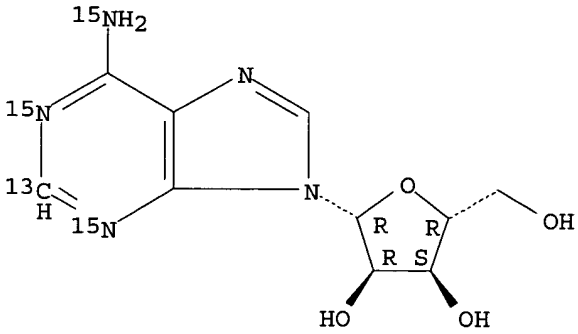
RN 244769-66-2 CAPLUS
CN Adenosine-N,1,3-15N3 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



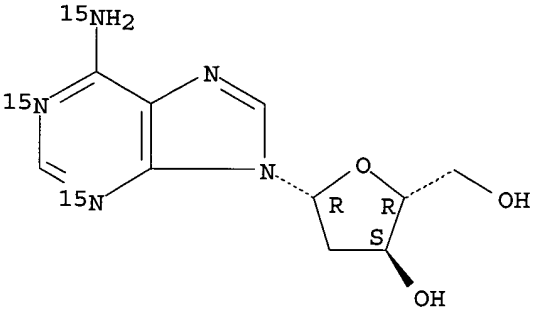
RN 244769-76-4 CAPLUS
CN Adenosine-2-13C-N,1,3-15N3 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



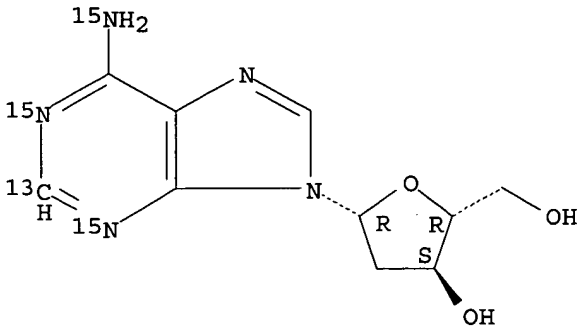
RN 244769-77-5 CAPLUS
CN Adenosine-N,1,3-15N3, 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



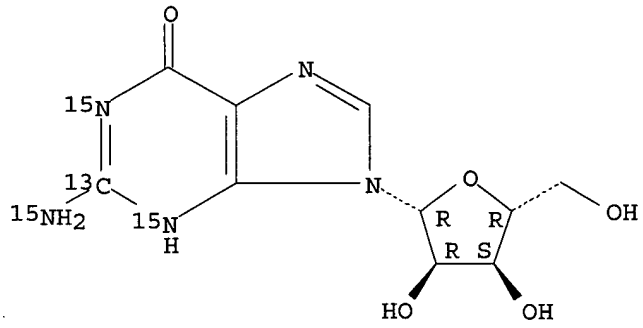
RN 244769-78-6 CAPLUS
CN Adenosine-2-13C-N,1,3-15N3, 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



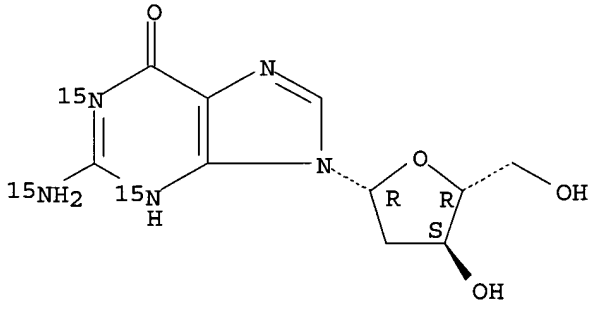
RN 244769-87-7 CAPLUS
CN Guanosine-2-13C-N,1,3-15N3 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



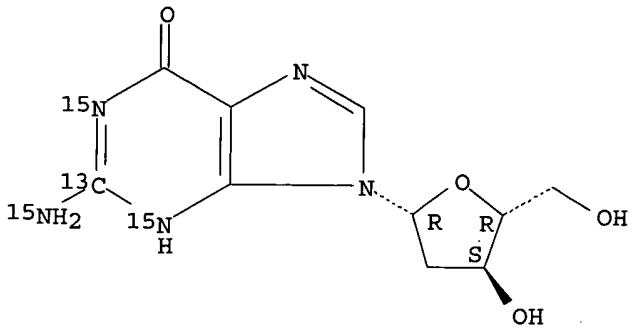
RN 244769-88-8 CAPLUS
CN Guanosine-N,1,3-15N3, 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 244769-89-9 CAPLUS
CN Guanosine-2-13C-N,1,3-15N3, 2'-deoxy- (9CI) (CA INDEX NAME)

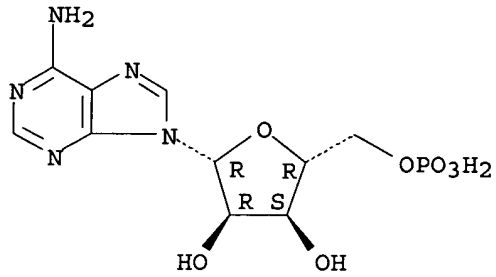
Absolute stereochemistry.



RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

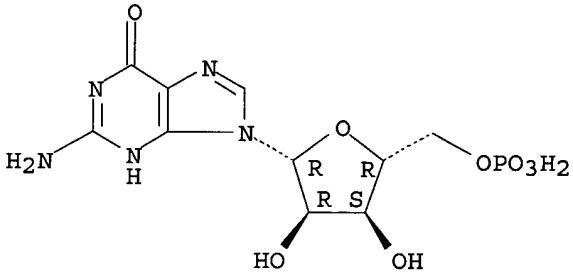
L6 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1999:143185 CAPLUS
DN 130:308594
TI Preparation of an IMI dye (**imidazole** functional group) containing a 4-(N,N-dimethylaminosulfonyl)-2,1,3-benzoxadiazole fluorophore for labeling of phosphomonoesters
AU Lan, Zhang-Hua; Qian, Xiaohua; Giese, Roger W.
CS Department of Pharmaceutical Sciences in the Bouve College of Pharmacy and Health Professions, Barnett Institute, and Chemistry Department, Northeastern University, Boston, MA, 02115, USA
SO Journal of Chromatography, A (1999), 831(2), 325-330
CODEN: JCRAEY; ISSN: 0021-9673
PB Elsevier Science B.V.
DT Journal
LA English
AB We are studying dye-**imidazole** conjugates ("IMI dyes") as reagents for labeling phosphomonoesters such as nucleotides. Previously we have employed a BODIPY dye in our IMI reagents, and analyzed the labeled products by capillary electrophoresis with laser-induced fluorescence detection (CE-LIF) involving an argon ion laser. (The BODIPY fluorophore is a 4,4-difluoro-4-bora-3a,4a-diaza-s-indacene). Here we broaden the technol. by prepg. a DBD-IMI dye [DBD = 4-(N,N-dimethylaminosulfonyl)-2,1,3-benzoxadiazole], and using a helium-cadmium laser. While DBD-IMI (IMI3) is about 50x more stable photolytically than a BODIPY-IMI dye (IMI2, a conjugate of a BODIPY dye with histamine, was tested), the detection limit for IMI2 (5.cntdot.10-11 M; SIN=5, CE-LIF with an argon ion laser) is tenfold better than that for IMI3 (5.cntdot.10-10 M, SIN=5, helium-cadmium laser). IMI3 conjugates of the four major DNA nucleotides were prepd. and detected by CE-LIF.
IT **61-19-8**, 5'-AMP, analysis **85-32-5**, 5'-GMP
RL: ANT (Analyte); BSU (Biological study, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent)
(prepn. of an IMI dye (**imidazole** functional group) contg. a 4-(N,N-dimethylaminosulfonyl)-2,1,3-benzoxadiazole fluorophore for labeling of phosphomonoesters)
RN 61-19-8 CAPLUS
CN 5'-Adenylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 85-32-5 CAPLUS
CN 5'-Guanylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1998:343335 CAPLUS
DN 129:51578
TI Phosphate-specific fluorescence labeling with BO-IMI: reaction details
AU Wang, Poguang; Giese, Roger W.
CS Chemistry Department, Barnett Institute, Department of Pharmaceutical Sciences in the Bouve College of Pharmacy and Health Professions, Northeastern University, Boston, MA, 02115, USA
SO Journal of Chromatography, A (1998), 809(1 + 2), 211-218
CODEN: JCRAEY; ISSN: 0021-9673
PB Elsevier Science B.V.
DT Journal
LA English
AB Previously the authors reported that BO-IMI, a reagent which contains a BODIPY fluorophore linked to an **imidazole** group, can be used to covalently **label** a phosphomonoester in a single step under aq. conditions [P. Wang, R.W. Giese, Anal. Chem . 65(1993) 3518]. The reaction was conducted in the presence of a water-sol. carbodiimide 1-ethyl-3-(3'-N,N'-dimethylaminopropyl)carbodiimide [EDC] to activate the phosphomonoester, and the coupling took place onto both the N1 and N3 **imidazole** nitrogens of BO-IMI. Whether the two BO-IMI-phosphomonoester regioisomers migrated sep. or together during capillary electrophoresis depended on the pH, due to a difference in their pKa values. Since then, the authors have studied the reaction in more detail leading to the information reported here. First, the regioisomer ratio changes during the reaction, and found that the mechanism involves both spontaneous and BO-IMI-catalyzed hydrolysis of the less stable isomer. Second, there is a background reaction in which BO-IMI becomes attached to EDC. Third, the BO-IMI-phosphomonoester product (a mixt. of two isomers), that is obsd. by capillary electrophoresis at an alk. pH, is found to no longer contain the two fluorine atoms present in the starting BO-IMI reagent. This is because they are replaced by hydroxy groups at

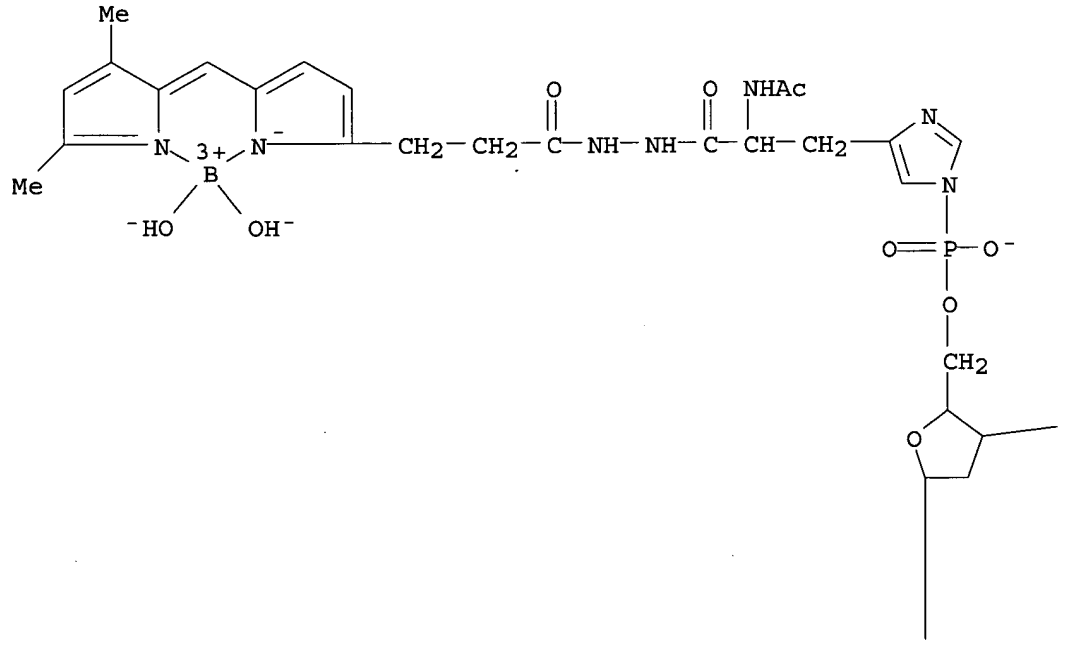
high pH. Finally, an event was discovered which complicates the detection of .ltorsim.60 fmol of a phosphomonoester with BO-IMI: hydrolysis of a tiny fraction of the BO-IMI takes place during the coupling reaction, which leads to chem. noise in the capillary electropherogram.

IT **208529-99-1**
RL: ANT (Analyte); FMU (Formation, unclassified); ANST (Analytical study); FORM (Formation, nonpreparative)
(capillary electrophoresis of)

RN 208529-99-1 CAPLUS

CN Borate(1-), [N-acetyl-1-(2'-deoxy-7,8-dihydro-8-oxo-5'-adenylyl)-L-histidine 2-[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]hydrazidato(2-)]dihydroxy-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

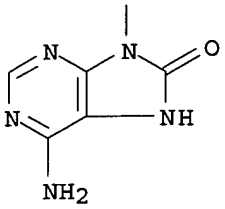
PAGE 1-A



PAGE 1-B

—OH

PAGE 2-A



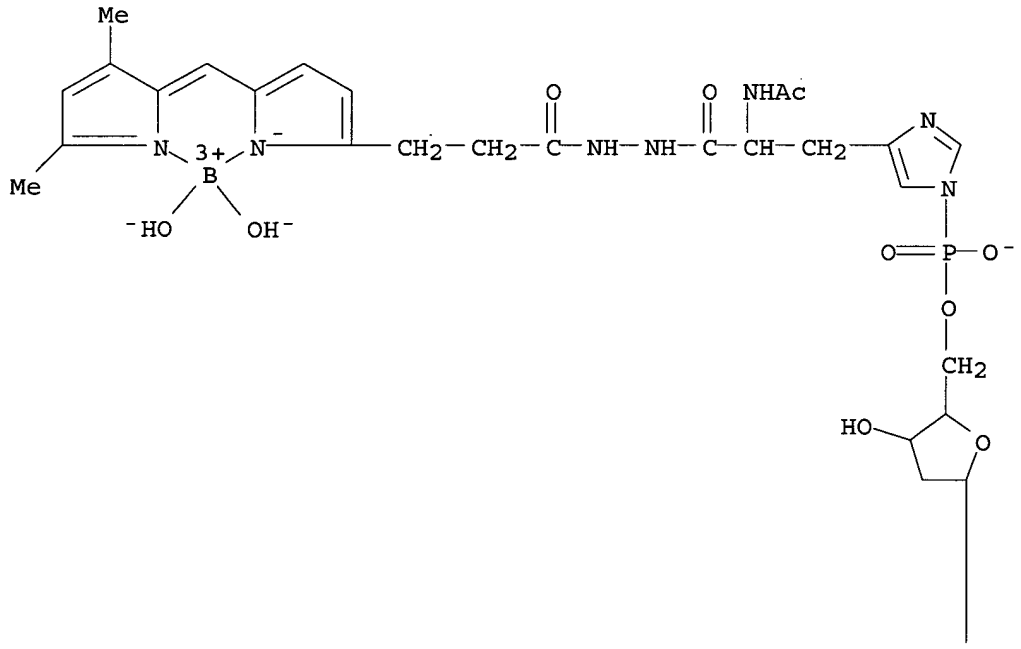
● H^+

IT **208529-95-7 208529-97-9 208530-05-6**
208530-07-8 208530-09-0
RL: ANT (Analyte); FMU (Formation, unclassified); ANST (Analytical study); FORM (Formation, nonpreparative)
(formation in phosphate-specific fluorescence labeling with BO-IMI)

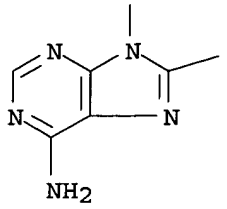
RN 208529-95-7 CAPLUS

CN Borate(1-), [N-acetyl-1-[2'-deoxy-8-(phenylmethoxy)-5'-adenylyl]-L-histidine 2-[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]hydrazidato(2-)]dihydroxy-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

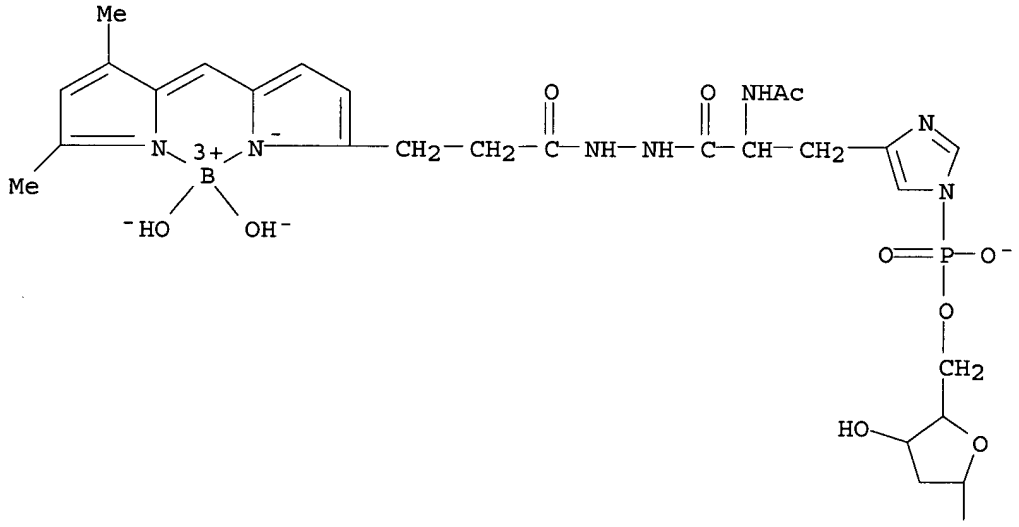


● H^+

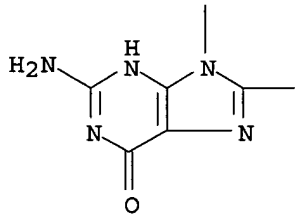
PAGE 2-B

RN 208529-97-9 CAPLUS
CN Borate(1-), [N-acetyl-1-[8-(acetyl-9H-fluoren-2-ylamino)-2'-deoxy-5'-guanylyl]-L-histidine 2-[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]hydrazidato(2-)]dihydroxy-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A

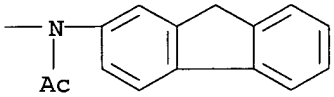


PAGE 2-A



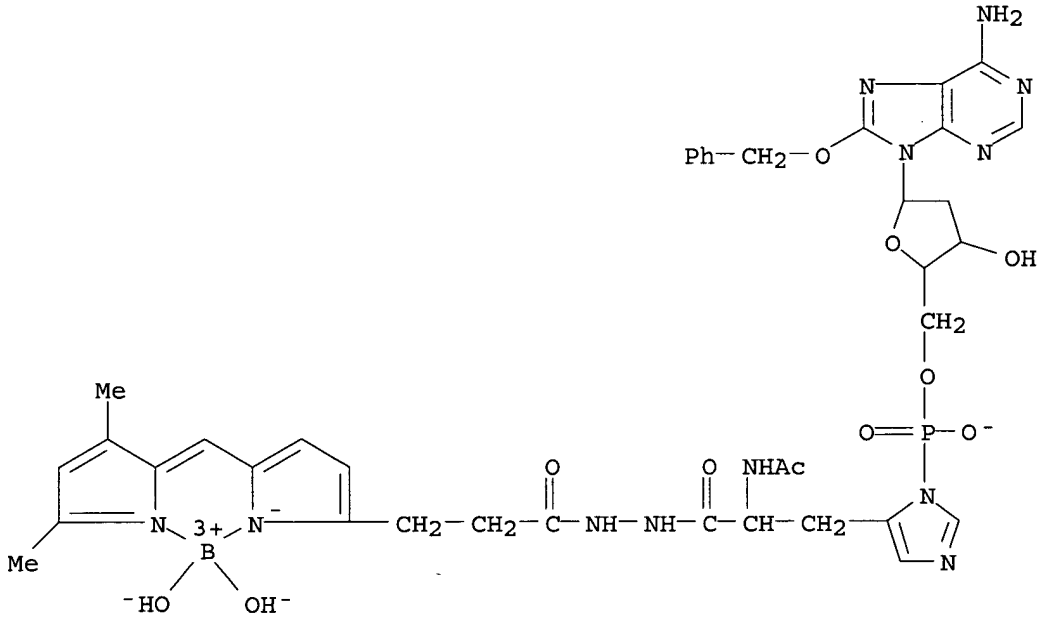
● H^+

PAGE 2-B



RN 208530-05-6 CAPLUS
CN Borate(1-), [N-acetyl-3-[2'-deoxy-8-(phenylmethoxy)-5'-adenylyl]-L-histidine 2-[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]hydrazidato(2-)]dihydroxy-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A

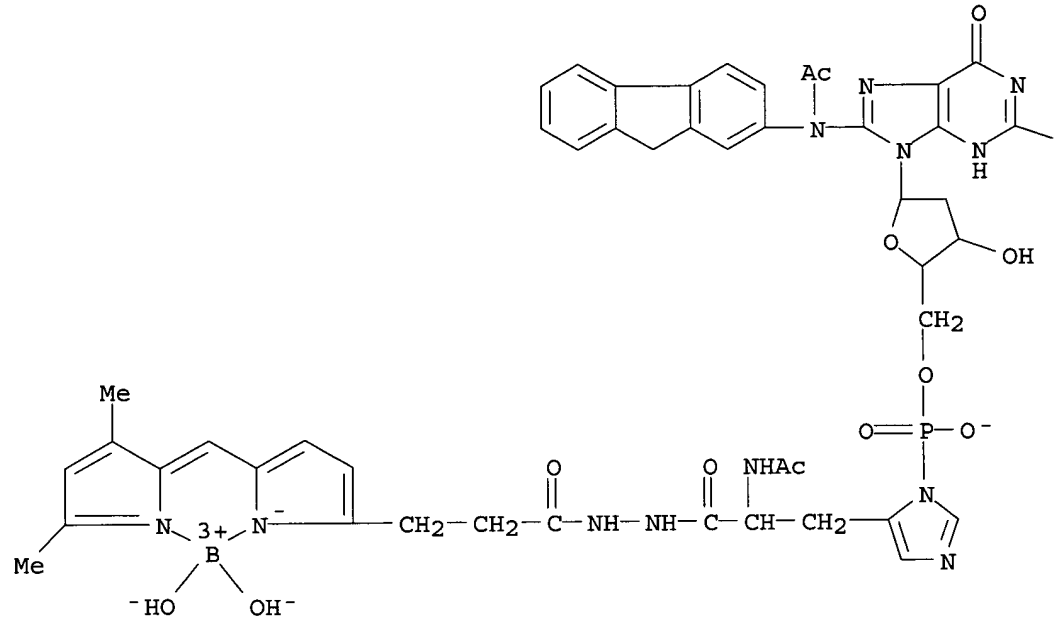


PAGE 2-A

● H^+

RN 208530-07-8 CAPLUS
CN Borate(1-), [N-acetyl-3-[8-(acetyl-9H-fluoren-2-ylamino)-2'-deoxy-5'-guanylyl]-L-histidine 2-[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]hydrazidato(2-)]dihydroxy-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



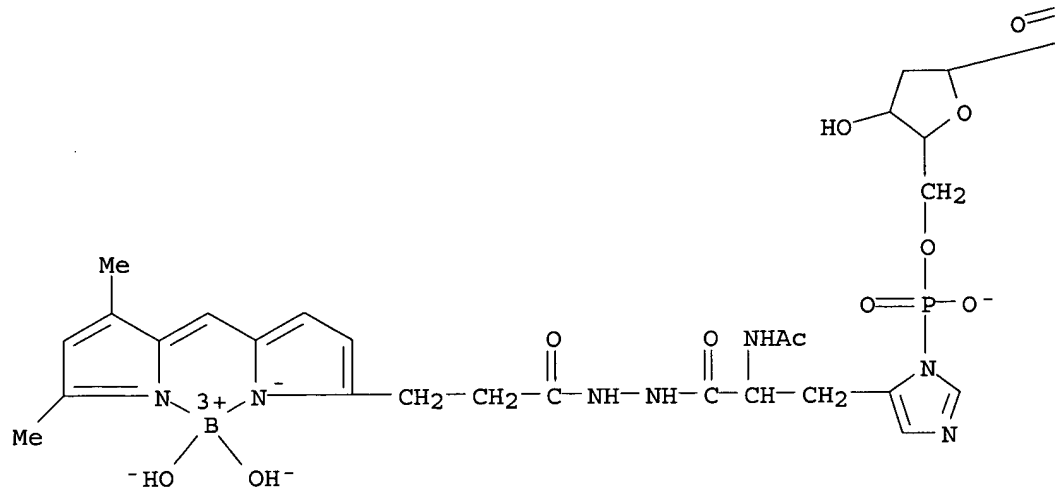
PAGE 1-B

NH_2

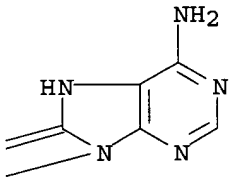
● H^+

RN 208530-09-0 CAPLUS
CN Borate(1-), [N-acetyl-3-(2'-deoxy-7,8-dihydro-8-oxo-5'-adenylyl)-L-histidine 2-[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]hydrazidato(2-)]dihydroxy-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



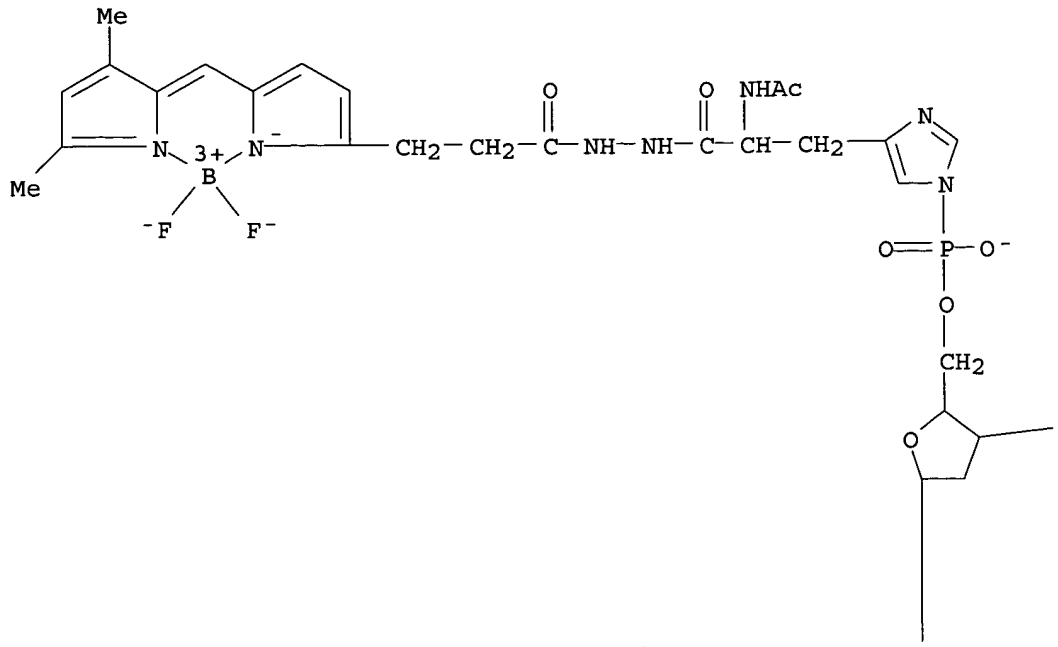
● H^+

IT **208529-77-5 208529-79-7 208529-83-3**
208529-85-5 208530-03-4
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(formation in phosphate-specific fluorescence labeling with BO-IMI)

RN 208529-77-5 CAPLUS

CN Borate(1-), [N-acetyl-1-(2'-deoxy-5'-adenylyl)-L-histidine 2-[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]hydrazidato(2-)]difluoro-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

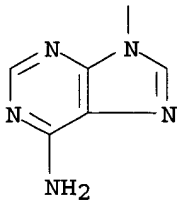
PAGE 1-A



PAGE 1-B

— OH

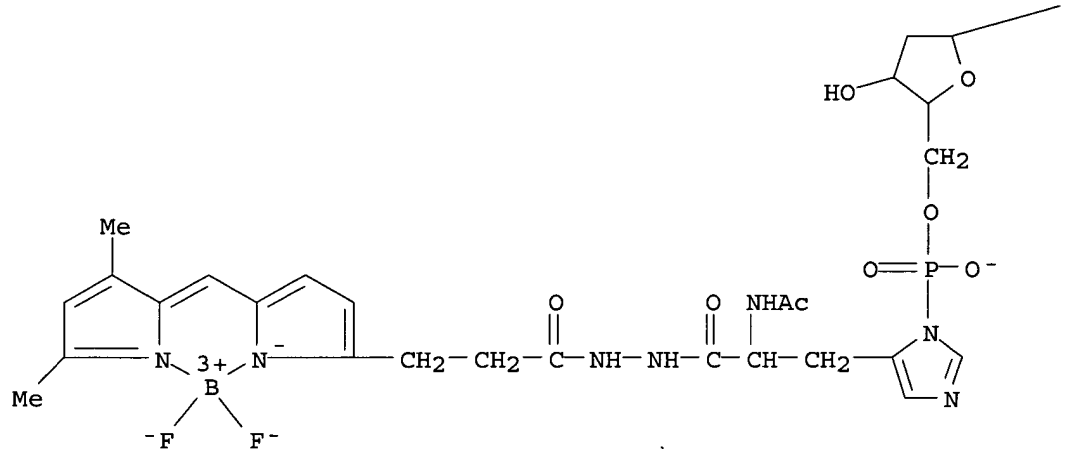
PAGE 2-A



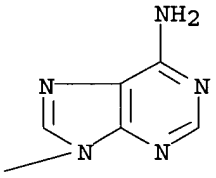
● H^+

RN 208529-79-7 CAPLUS
CN Borate(1-), [N-acetyl-3-(2'-deoxy-5'-adenylyl)-L-histidine 2-[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]hydrazidato(2-)]difluoro-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



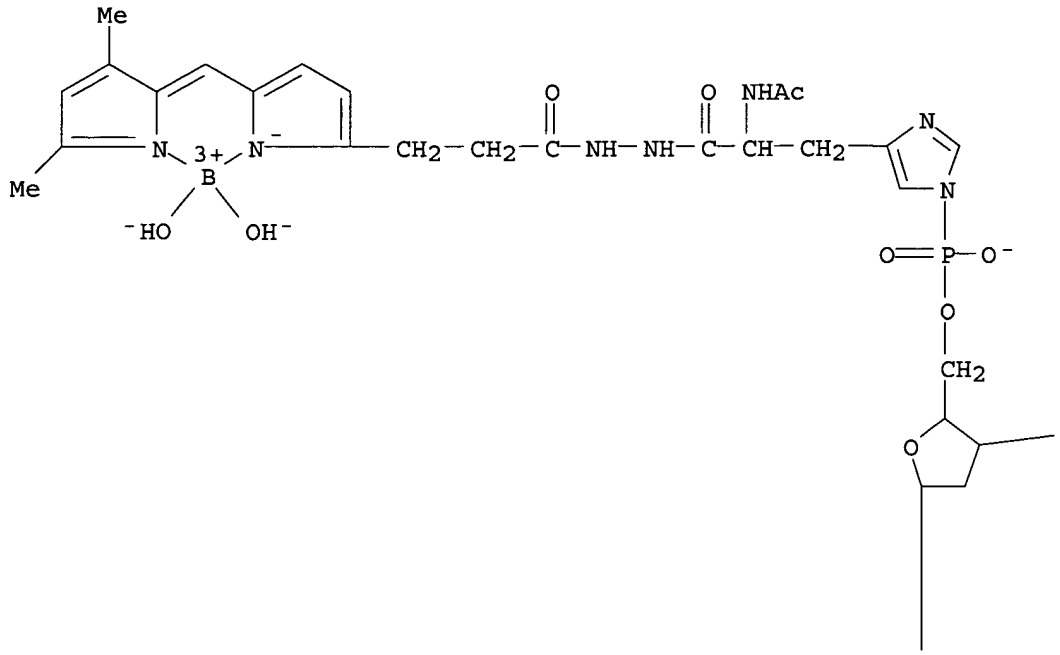
PAGE 1-B



● H^+

RN 208529-83-3 CAPLUS
CN Borate(1-), [N-acetyl-1-(2'-deoxy-5'-adenylyl)-L-histidine 2-[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]hydrazidato(2-)]dihydroxy-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

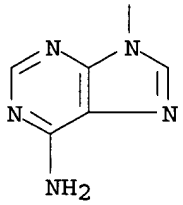
PAGE 1-A



PAGE 1-B

—OH

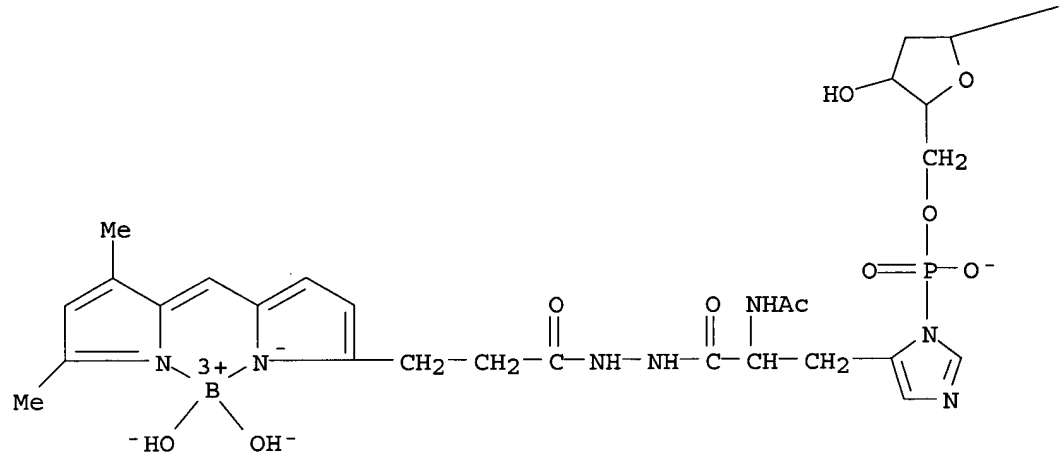
PAGE 2-A



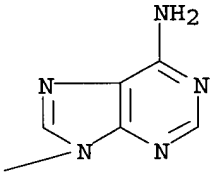
● H^+

RN 208529-85-5 CAPLUS
CN Borate(1-), [N-acetyl-3-(2'-deoxy-5'-adenylyl)-L-histidine 2-[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]hydrazidato(2-)]dihydroxy-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



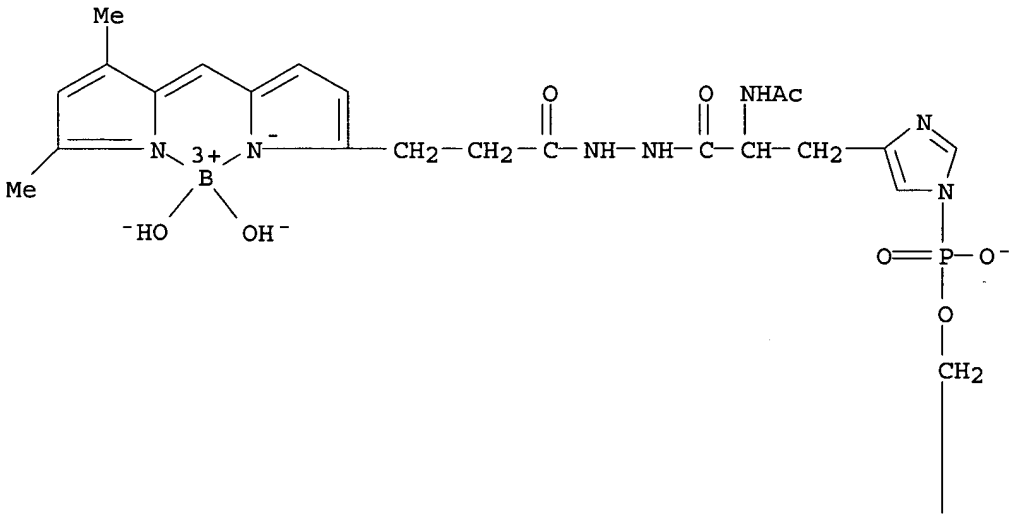
PAGE 1-B



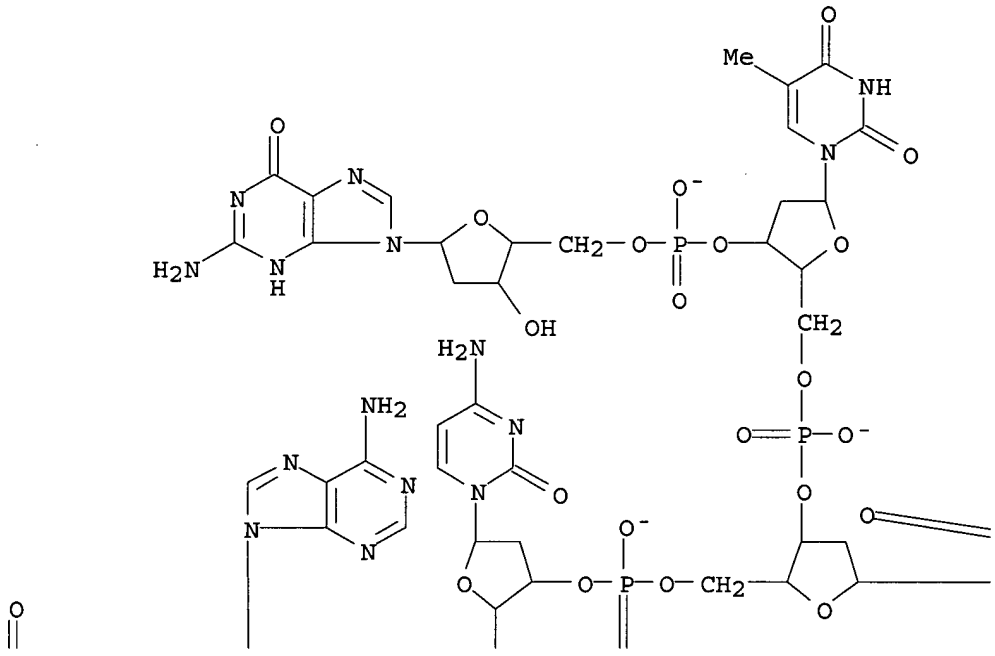
● H^+

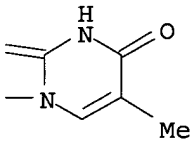
RN 208530-03-4 CAPLUS
CN Borate(8-), [N-acetyl-1-(2'-deoxyguanylyl-(5'.fwdarw.3')-thymidylyl-(5'.fwdarw.3')-thymidylyl-(5'.fwdarw.3')-2'-deoxycytidylyl-(5'.fwdarw.3')-2'-deoxyguanylyl-(5'.fwdarw.3')-2'-deoxyadenylyl-(5'.fwdarw.3')-2'-deoxyadenylyl-(5'.fwdarw.3')-2'-deoxy-5'-cytidylyl)-L-histidine 2-[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]hydrazidato(9-)]dihydroxy-, octahydrogen, (T-4)-(9CI) (CA INDEX NAME)

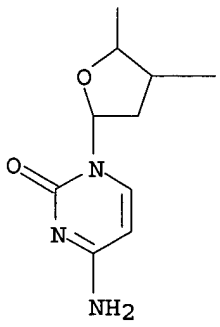
PAGE 1-A



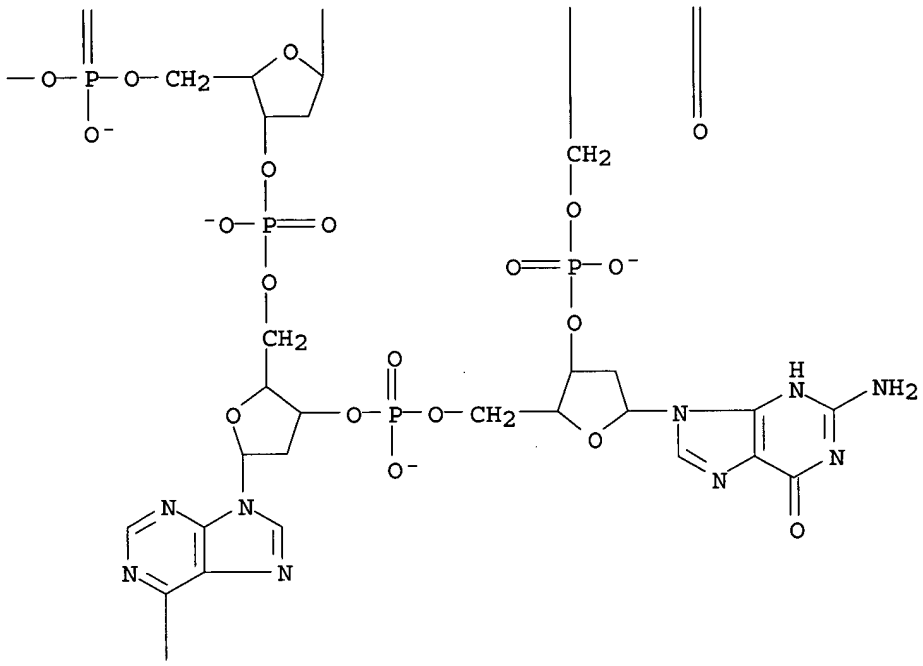
PAGE 1-B




H
N
O
N
Me


O
O
N
N
NH2

PAGE 2-B



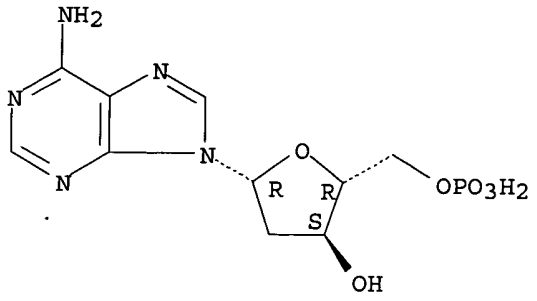
PAGE 3-A

● 8 H^+

PAGE 3-B

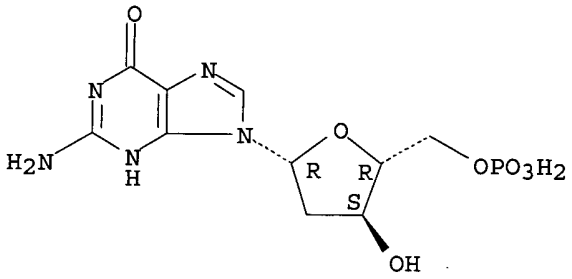
IT **653-63-4**
RL: ANT (Analyte); ANST (Analytical study)
(phosphate-specific fluorescence labeling with BO-IMI)
RN 653-63-4 CAPLUS
CN 5'-Adenylic acid, 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT **902-04-5**
RL: ANT (Analyte); ANST (Analytical study)
(phosphate-specific fluorescence labeling with BO-IMI and capillary electrophoresis of)
RN 902-04-5 CAPLUS
CN 5'-Guanylic acid, 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1997:653036 CAPLUS
DN 127:328923
TI Ammonium assimilation in bryophytes. L-Glutamine synthetase from Sphagnum fallax
AU Kahl, Stefan; Gerendas, Joska; Heeschen, Volker; Ratcliffe, R. George; Rudolph, Hansjorg
CS Biologiezentrum, Botanisches Inst. der Christian-Albrechts-Univ. zu Kiel, Kiel, D-24098, Germany
SO Physiologia Plantarum (1997), 101(1), 86-92
CODEN: PHPLAI; ISSN: 0031-9317
PB Munksgaard
DT Journal
LA English
AB Cytosolic and plastidic L-glutamine synthetase (E.C. 6.3.1.2) isoenzymes from Sphagnum fallax Klinggr. (Klinggr. clone 1) were sepd. by size-exclusion and ion exchange chromatog. The cytosolic enzyme (GS1) was purified to apparent electrophoretic homogeneity. The native enzyme had a mol. mass of 390 .+-. 20 kDa as estd. by gel filtration and was apparently composed of 8 subunits with mol. masses of 48 kDa. GS1 activity could be measured from pH 6.8 to 8.6 in 50 mM **imidazole** buffer, with a broad optimum between pH 7.2 and 8.0. The Km values were 2.5, 0.5, and 0.5 mM for L-glutamate, ammonium, and ATP, resp. The enzyme was inhibited by more than 10 mM ammonium or glutamate. The incorporation of 15NH4+ into amino acids was obsd. in vivo using 15N NMR. **Label** from ammonium was first detected in the amide N of glutamine, and only subsequently in the amino N of glutamate. Moreover, no assimilation was detected in the presence of the specific GS inhibitor methionine sulfoximine. These observations are consistent with a dominant role for

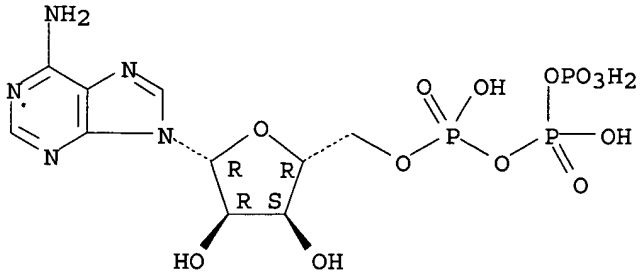
GS in the assimilation of ammonium in Sphagnum.

IT **56-65-5**, 5'-ATP, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(reaction with glutamine synthetase isoenzyme, kinetics of; ammonium assimilation in bryophytes: glutamine synthetase from Sphagnum fallax)

RN 56-65-5 CAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2002 ACS

AN 1996:323936 CAPLUS

DN 125:81261

TI Single-step signal group-**imidazole** labeling of organic phosphate groups under aqueous conditions

IN Giese, Roger W.; Wang, Poguang

PA Northeastern University, USA

SO U.S., 9 pp.
CODEN: USXXAM

DT Patent

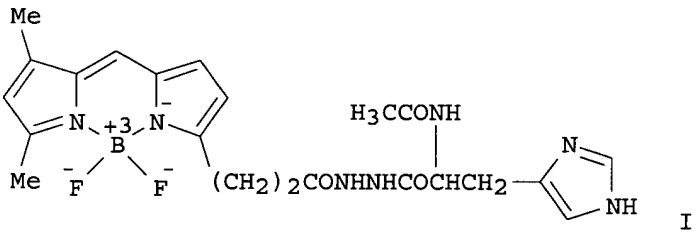
LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5512486	A	19960430	US 1993-60569	19930510

OS MARPAT 125:81261

GI



I

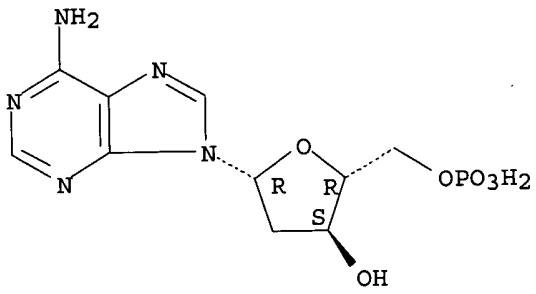
AB Compds. and methods for single-step, covalent labeling of the phosphate group of an org. substance under aq. conditions are described. The labeling compd. includes any kind of detectable signal group covalently bound to an **imidazole** moiety, which can be **imidazole** or a substituted **imidazole**. A preferred labeling compd. has the formula I.

IT **653-63-4 902-04-5 14490-86-9 148807-02-7 178388-84-6**
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)

(1-step signal group-**imidazole** labeling of org. phosphate groups under aq. conditions)

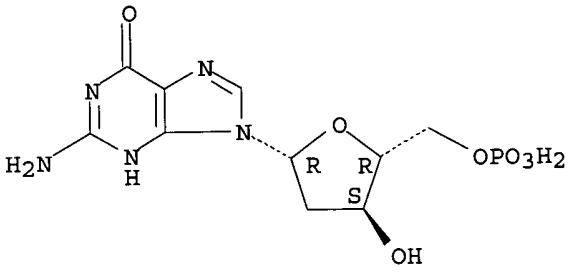
RN 653-63-4 CAPLUS
CN 5'-Adenylic acid, 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



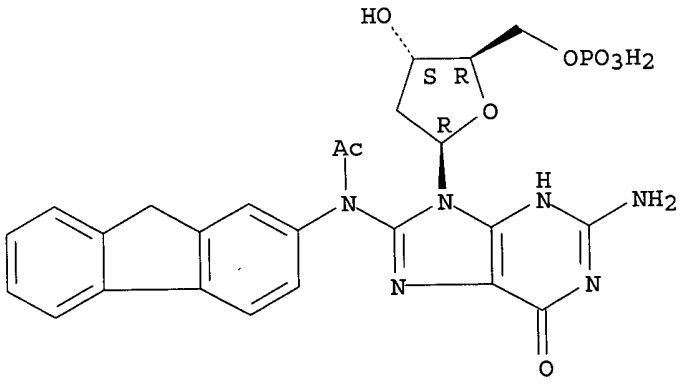
RN 902-04-5 CAPLUS
CN 5'-Guanylic acid, 2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



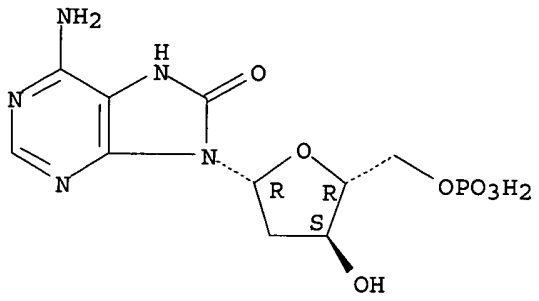
RN 14490-86-9 CAPLUS
CN 5'-Guanylic acid, 8-(acetyl-9H-fluoren-2-ylamino)-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



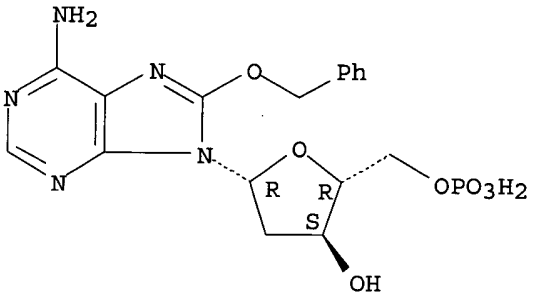
RN 148807-02-7 CAPLUS
CN 5'-Adenylic acid, 2'-deoxy-7,8-dihydro-8-oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 178388-84-6 CAPLUS
CN 5'-Adenylic acid, 2'-deoxy-8-(phenylmethoxy)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1992:585040 CAPLUS
DN 117:185040
TI Chemical modification and irreversible inhibition of striatal A2a adenosine receptors
AU Jacobson, Kenneth A.; Stiles, Gary L.; Ji, Xiao Duo
CS Lab. Bioorg. Chem., Natl. Inst. Diabetes Dig. Kidney Dis., Bethesda, MD, 20892, USA
SO Mol. Pharmacol. (1992), 42(1), 123-33
CODEN: MOPMA3; ISSN: 0026-895X
DT Journal
LA English
AB The ligand recognition site of A2a-adenosine receptors in rabbit striatal membranes was probed using non-site-directed labeling reagents and specific affinity labels. Exposure of membranes to di-Et pyrocarbonate at a concn. of 2.5 mM, followed by washing, was found to inhibit the binding of [3H]CGS 21680 and [3H]xanthine amine congener to A2a receptors, by 86 and 30%, resp. Protection from di-Et pyrocarbonate inactivation by an adenosine receptor agonist, 5'-N-ethylcarboxamidoadenosine, and an antagonist, theophylline, suggested the presence of two histidyl residues on the receptor, one assocd. with agonist binding and the other with antagonist binding. Binding of [3H]CGS 21680 or [3H]xanthine amine congener was partially restored after incubation with 250 mM hydroxylamine, further supporting histidine as the modification site. Preincubation with disulfide-reactive reagents, dithiothreitol or sodium dithionite, at >5 mM inhibited radioligand binding, indicating the presence of essential disulfide bridges in A2a receptors, whereas the concn. of mercaptoethanol required to inhibit binding was >50 mM. A no. of isothiocyanate-bearing affinity labels derived from the A2a-selective agonist 2-[(2-aminoethylamino)carbonylethylphenylethylamino]-5'-N-ethylcarboxamidoadenosine (APEC) were synthesized and found to inhibit A2a receptor binding in rabbit and bovine striatal membranes. Binding to

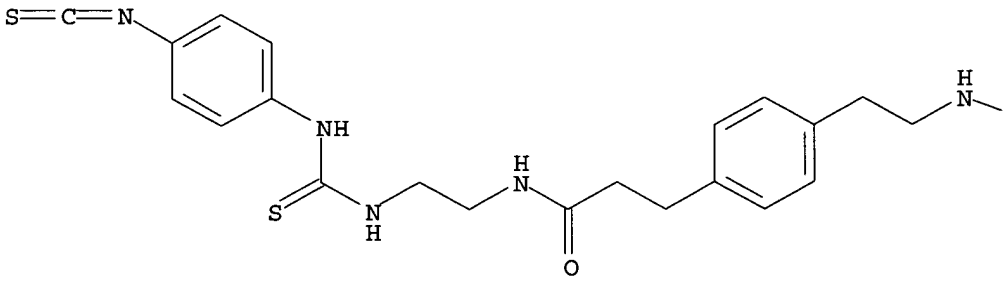
rabbit a1 receptors was not inhibited. Preincubation with the affinity **label** 4-isothiocyanatophenylaminothiocarbonyl-APEC (100 nM) diminished the Bmax for [3H]CGS 21680 binding by 71%, and the Kd was unaffected, suggesting a direct modification of the ligand binding site. Reversal of 4-isothiocyanatophenylaminothiocarbonyl-APEC inhibition of [3H]CGS 21680 binding with hydroxylamine suggested that the site of modification by the isothiocyanate is a cysteine residue. A bromoacetyl deriv. of APEC was ineffective as an affinity **label** at submicromolar concns.

IT **129666-43-9P 143999-46-6P 143999-47-7P 143999-48-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as purinergic P2a receptor affinity labeling probe)

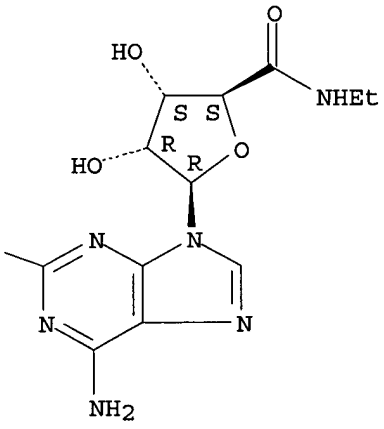
RN 129666-43-9 CAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[[2-[4-[3-[[2-[[[(4-isothiocyanatophenyl)amino]thioxomethyl]amino]ethyl]amino]-3-oxopropyl]phenyl]ethyl]amino]-9H-purin-9-yl]-1-deoxy-N-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



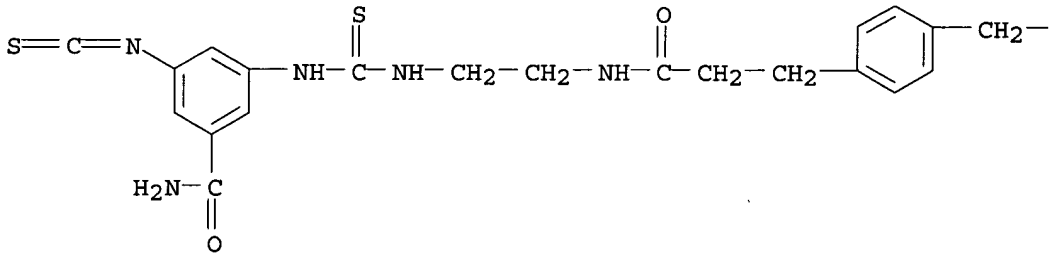
PAGE 1-B



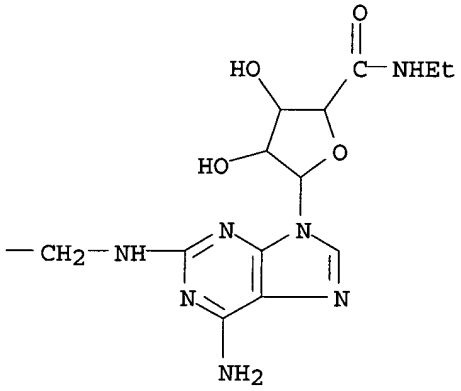
RN 143999-46-6 CAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[[2-[4-[3-[[2-[[[[3-

(aminocarbonyl)-5-isothiocyanatophenyl]amino]thioxomethyl]amino]ethyl]amin
o]-3-oxopropyl]phenyl]ethyl]amino]-9H-purin-9-yl]-1-deoxy-N-ethyl- (9CI)
(CA INDEX NAME)

PAGE 1-A

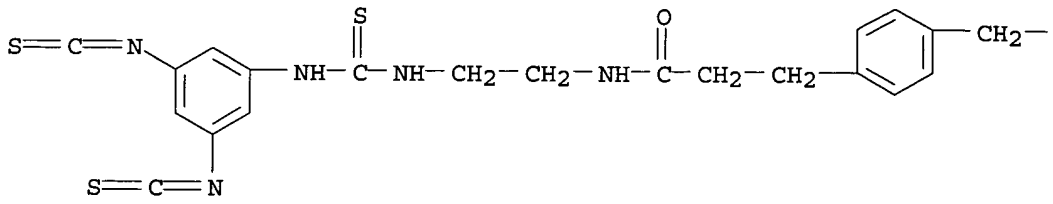


PAGE 1-B

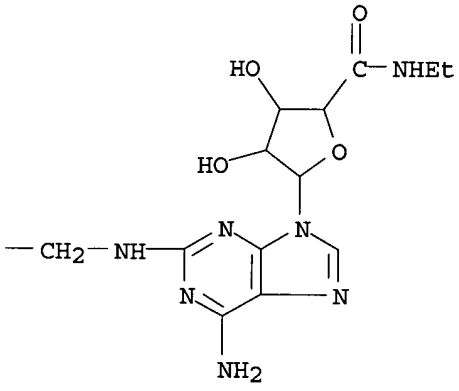


RN 143999-47-7 CAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[[2-[4-[3-[[2-[[[(3,5-
diisothiocyanatophenyl)amino]thioxomethyl]amino]ethyl]amino]-3-
oxopropyl]phenyl]ethyl]amino]-9H-purin-9-yl]-1-deoxy-N-ethyl- (9CI) (CA
INDEX NAME)

PAGE 1-A

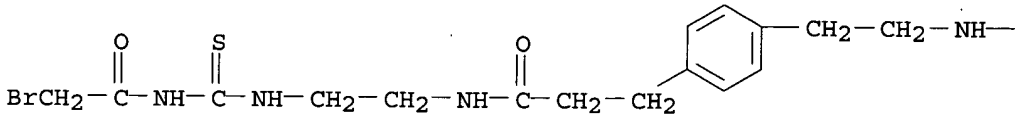


PAGE 1-B

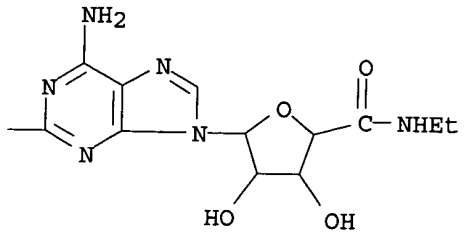


RN 143999-48-8 CAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[[2-[4-[3-[[2-[[[(bromoacetyl)amino]thioxomethyl]amino]ethyl]amino]-3-oxopropyl]phenyl]ethyl]amino]-9H-purin-9-yl]-1-deoxy-N-ethyl- (9CI) (CA INDEX NAME)

PAGE 1-A



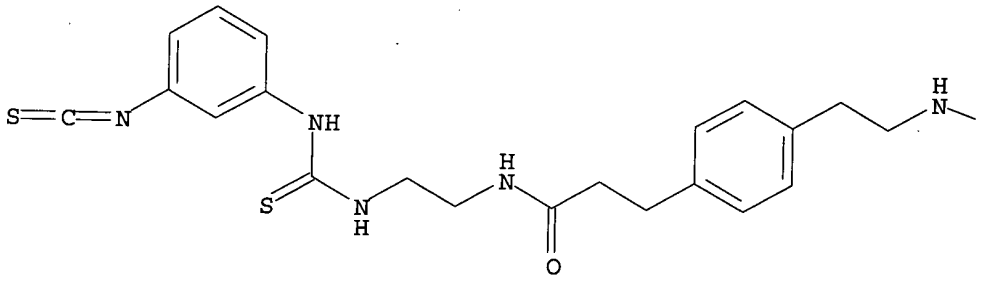
PAGE 1-B



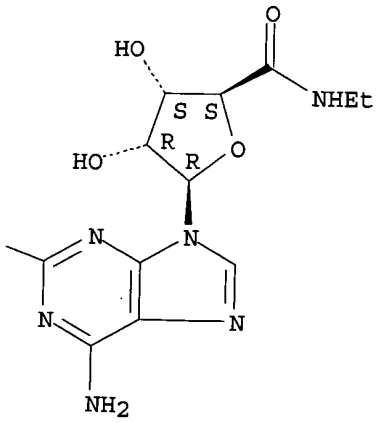
IT **129681-42-1**
RL: BIOL (Biological study)
(purinergic P2a receptor affinity labeling probe)
RN 129681-42-1 CAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[[2-[4-[3-[[2-[[[(3-isothiocyanatophenyl)amino]thioxomethyl]amino]ethyl]amino]-3-oxopropyl]phenyl]ethyl]amino]-9H-purin-9-yl]-1-deoxy-N-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



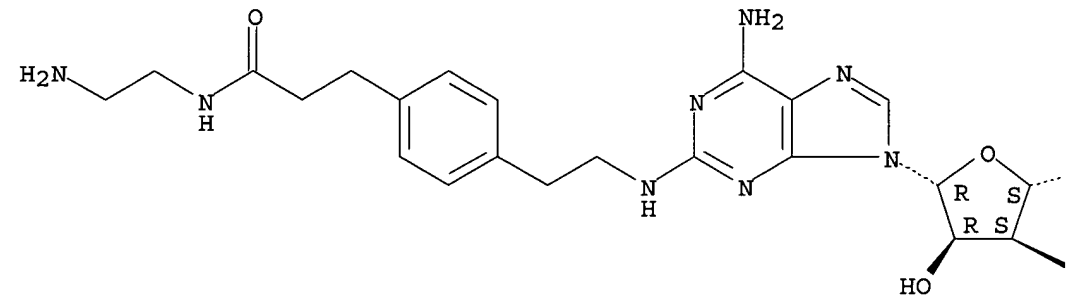
PAGE 1-B



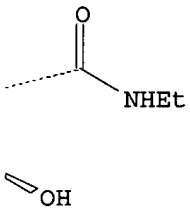
IT **126828-50-0**
RL: RCT (Reactant)
(reaction of, with isothiocyanates, in prepn. of purinergic P2a receptor affinity labeling probes)
RN 126828-50-0 CAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[[2-[4-[3-[(2-aminoethyl)amino]-3-oxopropyl]phenyl]ethyl]amino]-9H-purin-9-yl]-1-deoxy-N-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



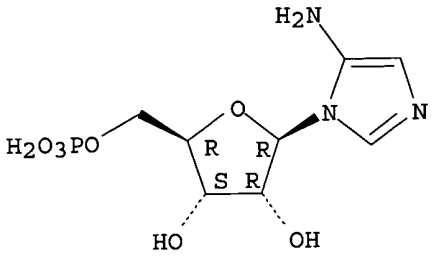
L6 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1990:568692 CAPLUS
DN 113:168692
TI Conversion of 5-aminoimidazole ribotide to the pyrimidine of thiamin in enterobacteria: study of the pathway with specifically labeled samples of riboside
AU Estramareix, Bernard; David, Serge
CS Inst. Chim. Mol., Univ. Paris-Sud, Orsay, 91405, Fr.
SO Biochim. Biophys. Acta (1990), 1035(2), 154-60
CODEN: BBACAQ; ISSN: 0006-3002
DT Journal
LA English
AB Samples of 5-amino-1-(.beta.-D-ribofuranosyl)**imidazole** labeled with 13C at position C-1 or C-2 of the ribose part or with 15N at position N-3 or amino of the **imidazole** part were prepd. by chem. synthesis. The incorporation of **label** from these samples into the pyrimidine of thiamin biosynthesized by a mutant strain of Salmonella typhimurium was studied by GC-MS. The results show that in enterobacteria the Me carbon atom and the N-1 nitrogen atom of one mol. of thiamin pyrimidine derive from the same mol. of 5-aminoimidazole ribotide. More specifically, the Me carbon atom comes from the carbon C-2' of the ribose part and the nitrogen N-1 from nitrogen N-3 of the **imidazole**; furthermore, the amino nitrogen of the aminoimidazole becomes the amino

nitrogen of the pyrimidine.

IT **25635-88-5 30597-39-8**, 5-Aminoimidazole riboside
RL: PROC (Process)
(conversion of, to pyrimidine of thiamin by enterobacteria)

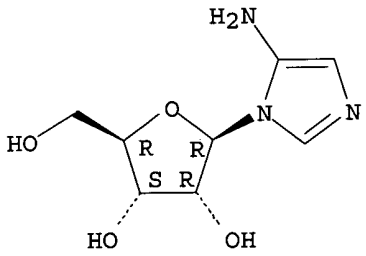
RN 25635-88-5 CAPLUS
CN 1H-Imidazol-5-amine, 1-(5-O-phosphono-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 30597-39-8 CAPLUS
CN 1H-Imidazol-5-amine, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

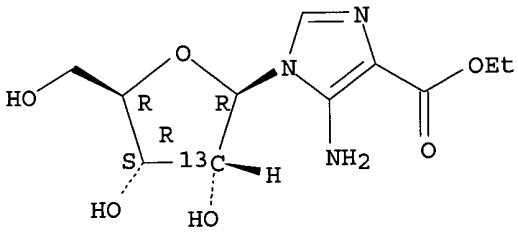
Absolute stereochemistry.



IT **129822-69-1P 129822-70-4P 129822-71-5P**
129838-71-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

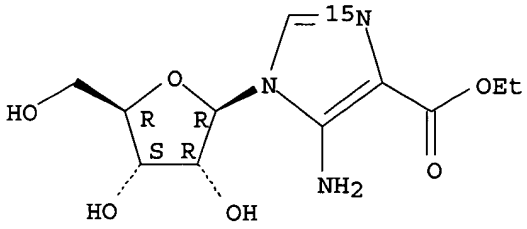
RN 129822-69-1 CAPLUS
CN 1H-Imidazole-4-carboxylic acid, 5-amino-1-(.beta.-D-ribofuranosyl-2-13C)-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



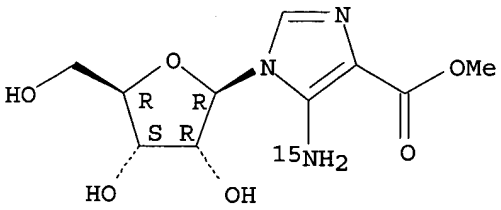
RN 129822-70-4 CAPLUS
CN 1H-Imidazole-3-15N-4-carboxylic acid, 5-amino-1-.beta.-D-ribofuranosyl-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



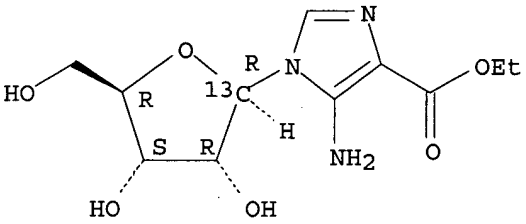
RN 129822-71-5 CAPLUS
CN 1H-Imidazole-4-carboxylic acid, 5-(amino-15N)-1-.beta.-D-ribofuranosyl-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 129838-71-7 CAPLUS
CN 1H-Imidazole-4-carboxylic acid, 5-amino-1-(.beta.-D-ribofuranosyl-1-13C)-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1988:438155 CAPLUS
DN 109:38155
TI Synthesis of fluorescent or biotinylated nucleoside compounds
AU Sarfati, S. R.; Pochet, Sylvie; Guerreiro, C.; Namane, A.; Huynh Dinh, Tam; Igolen, Jean
CS Dep. Biochim. Genet. Mol., Inst. Pasteur, Paris, 75724/15, Fr.
SO Tetrahedron (1987), 43(15), 3491-7
CODEN: TETRAB; ISSN: 0040-4020
DT Journal
LA English
OS CASREACT 109:38155
GI

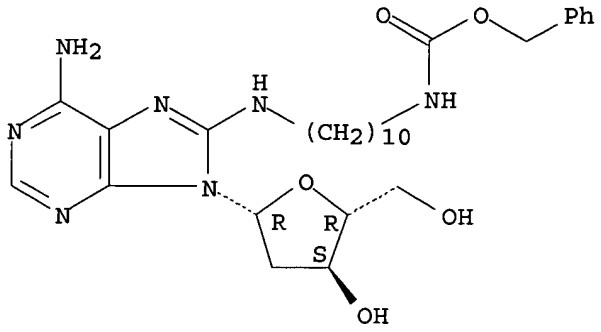
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Two types of modified nucleoside derivs. I (R = H, dansyl) of 2'-deoxycytidine and II of 2'-deoxyadenosine, useful for the specific attachment of non-radioactive labeling reagents such as fluorescent or

biotinyl group were prepd. II converted into the biotinylated deriv. which is a substrate for DNA polymerase.

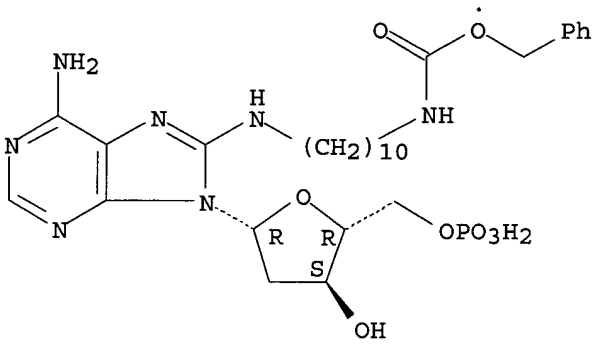
IT **115244-09-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and benzoylation of)
RN 115244-09-2 CAPLUS
CN Carbamic acid, [10-[[6-amino-9-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-9H-purin-8-yl]amino]decyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



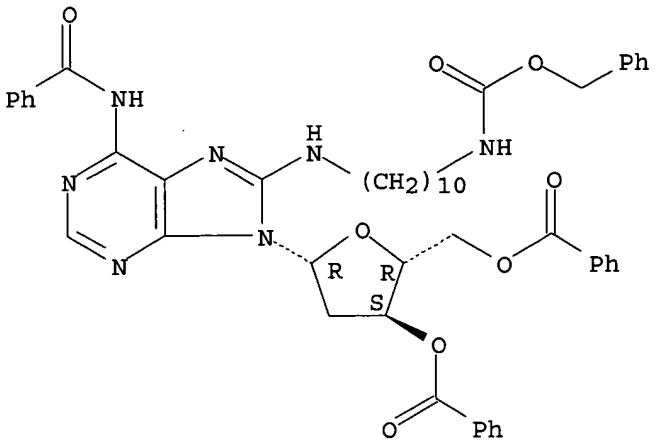
IT **115244-11-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to morpholide)
RN 115244-11-6 CAPLUS
CN Carbamic acid, [10-[[6-amino-9-(2-deoxy-5-O-phosphono-.beta.-D-erythro-pentofuranosyl)-9H-purin-8-yl]amino]decyl]-, C-(phenylmethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



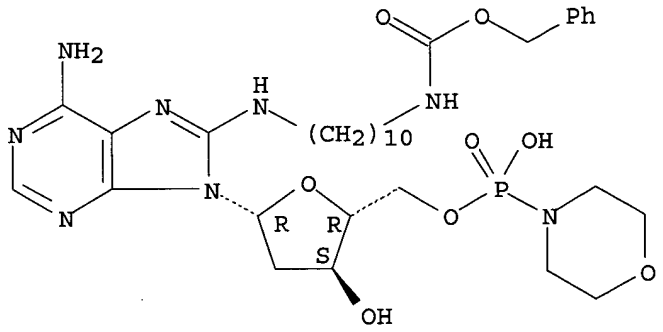
IT **115244-16-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and debenzoylation of)
RN 115244-16-1 CAPLUS
CN Carbamic acid, [10-[[6-(benzoylamino)-9-(3,5-di-O-benzoyl-2-deoxy-.beta.-D-erythro-pentofuranosyl)-9H-purin-8-yl]amino]decyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



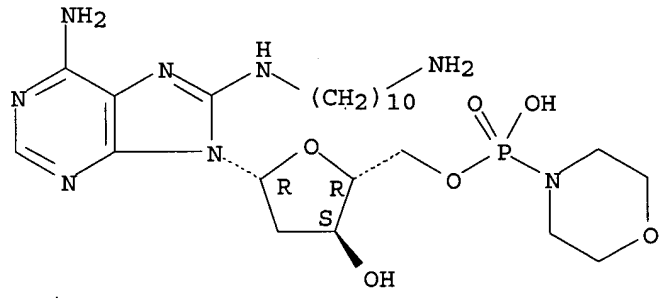
IT **115244-14-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and hydrogenolysis of)
RN 115244-14-9 CAPLUS
CN Carbamic acid, [10-[[6-amino-9-[2-deoxy-5-O-(hydroxy-4-morpholinylphosphinyl)-.beta.-D-erythro-pentofuranosyl]-9H-purin-8-yl]amino]decyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



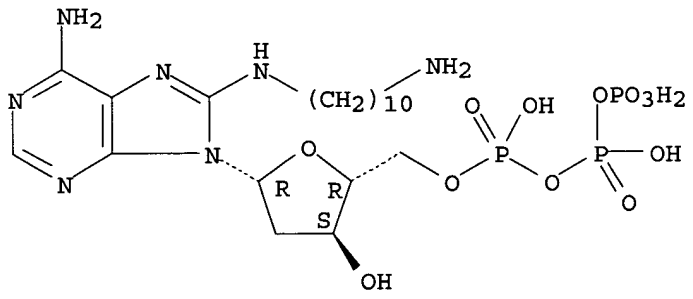
IT **115244-15-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and phosphorylation of)
RN 115244-15-0 CAPLUS
CN Adenosine, 8-[(10-aminodecyl)amino]-2'-deoxy-, 5'-(hydrogen 4-morpholinylphosphonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



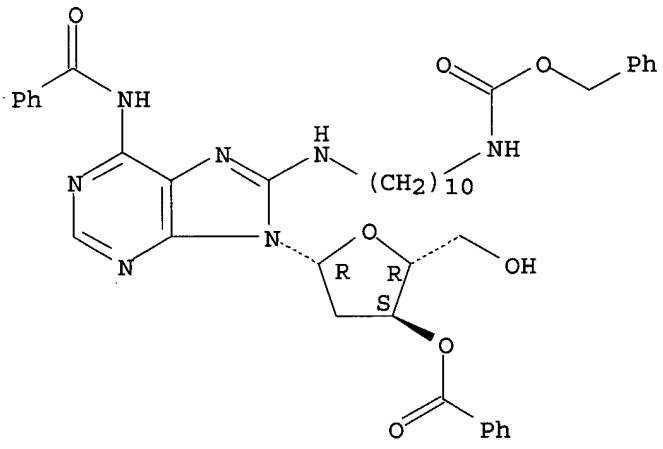
IT **115244-12-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with biotin deriv.)
RN 115244-12-7 CAPLUS
CN Adenosine 5'-(tetrahydrogen triphosphate), 8-[(10-aminodecyl)amino]-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



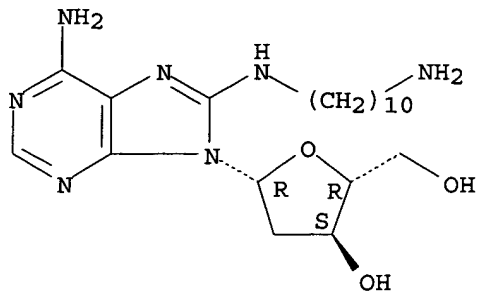
IT **115260-06-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with cyanoethyl phosphate)
RN 115260-06-5 CAPLUS
CN Carbamic acid, [10-[[6-(benzoylamino)-9-(3-O-benzoyl-2-deoxy-.beta.-D-erythro-pentofuranosyl)-9H-purin-8-yl]amino]decyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



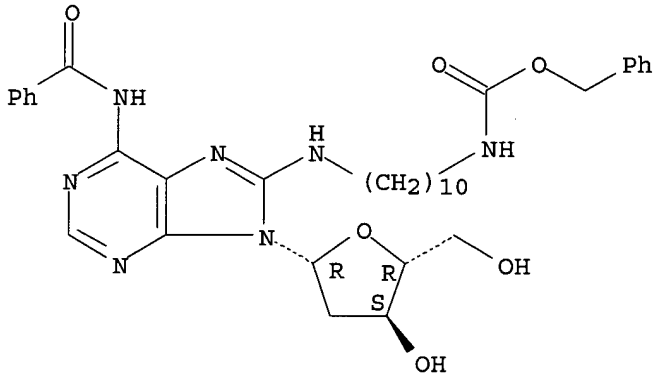
IT **115244-08-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with **imidazole** deriv.)
RN 115244-08-1 CAPLUS
CN Adenosine, 8-[(10-aminodecyl)amino]-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

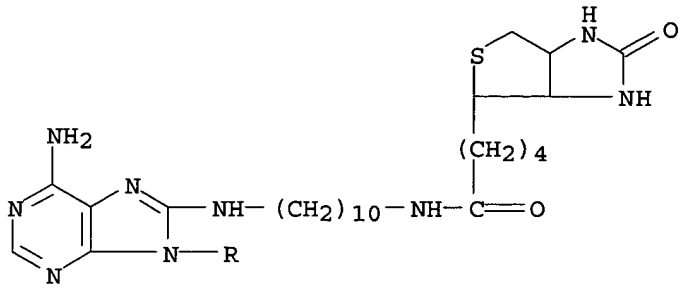


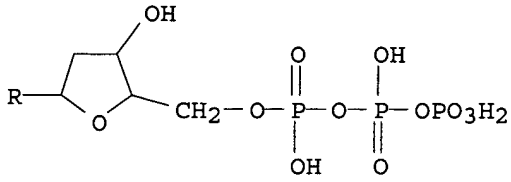
IT **115244-10-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and tritylation of)
RN 115244-10-5 CAPLUS
CN Carbamic acid, [10-[[6-(benzoylamino)-9-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-9H-purin-8-yl]amino]decyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



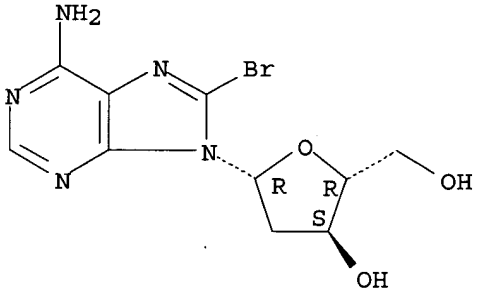
IT **115244-13-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as nonradioactively labeled deoxyadenosine deriv.)
RN 115244-13-8 CAPLUS
CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-8-[[10-[[5-(hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl)-1-oxopentyl]amino]decyl]amino]-, [3aS-(3a.alpha.,4.beta.,6a.alpha.)]- (9CI) (CA INDEX NAME)





IT **14985-44-5**
RL: RCT (Reactant)
(reaction of, with decanediamine)
RN 14985-44-5 CAPLUS
CN Adenosine, 8-bromo-2'-deoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



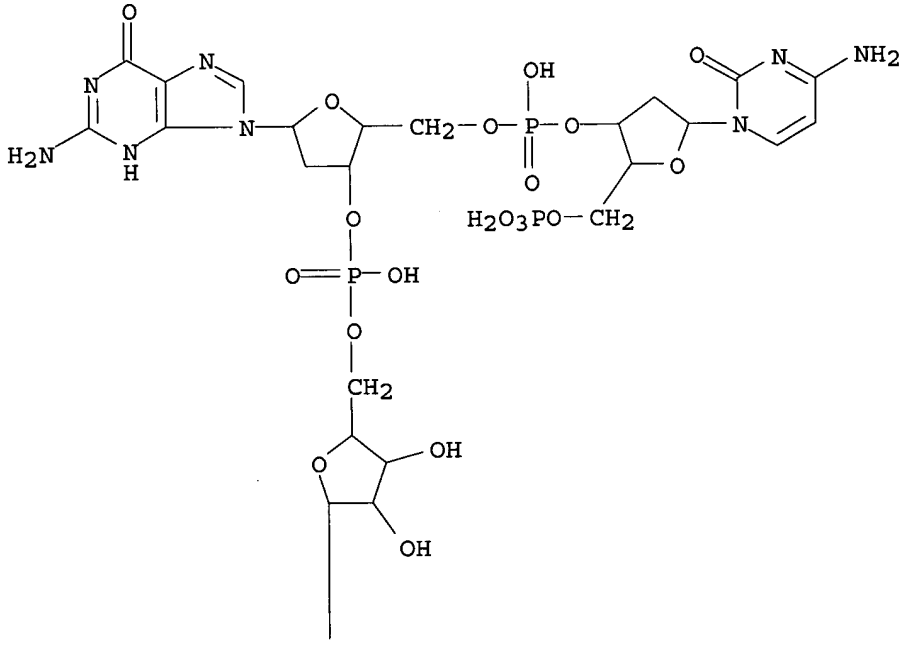
L6 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1987:571439 CAPLUS
DN 107:171439
TI Studies of the functional topography of Escherichia coli RNA polymerase. Affinity labelling of RNA polymerase in a promoter complex by phosphorylating derivatives of primer oligonucleotides
AU Godovikova, T. S.; Grachev, M. A.; Kutyavin, I. V.; Tsarev, I. G.; Zarytova, V. F.; Zaychikov, E. F.
CS Novosibirsk Inst. Bioorg. Chem., Novisibirsk, 630090, USSR
SO Eur. J. Biochem. (1987), 166(3), 611-16
CODEN: EJBCAI; ISSN: 0014-2956
DT Journal
LA English
AB Amidation of the 5'-phosphate group of the heptanucleotide pdApdApdApdTpdCpdGprC and of its derivs. of the general formula (pdN)npdGprC (n = 0-5, dN = deoxynucleoside) with **imidazole**, N-methylimidazole, and 4-dimethylaminopyridine afforded a series of phosphorylating affinity reagents. The parent oligonucleotides of this series are complementary to promoter A2 of T7 phage over the region (-5 to +2) and are known to be efficient primers of the synthesis of RNA by E. coli RNA polymerase with promoter A2 as template. Treatment of the

complex RNA-polymerase.cntdot.promter-A2 with affinity reagents followed by addn. of [.alpha.-32P]UTP resulted in labeling of RNA polymerase by the residues -(pdN)npdGprC*prU (*p = radioactive phosphate). This affinity labeling was highly selective because elongation of the covalently bound residues (pdN)npdGprC by *prU residues was catalyzed by the active center of RNA polymerase. The most efficient reagents were N-methylimidazolides. A dramatic change of the pattern of labeling of the subunits .beta., .beta.', and .sigma. took place with changing n. Max. labeling of the .beta. subunit occurred at n = 1 and of the .sigma. subunit at n = 5. The targets in both the subunits were histidine residues. The .alpha. subunit was not specifically labeled.

IT **94479-02-4 94479-07-9 94479-08-0**
94479-09-1 110651-95-1 110671-51-7
RL: RCT (Reactant)
(amidation of)

RN 94479-02-4 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-phosphonocytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

PAGE 1-A



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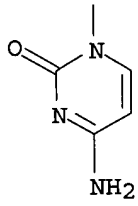

RN 94479-07-9 CAPLUS
CN Cytidine, 5'-O-phosphonothymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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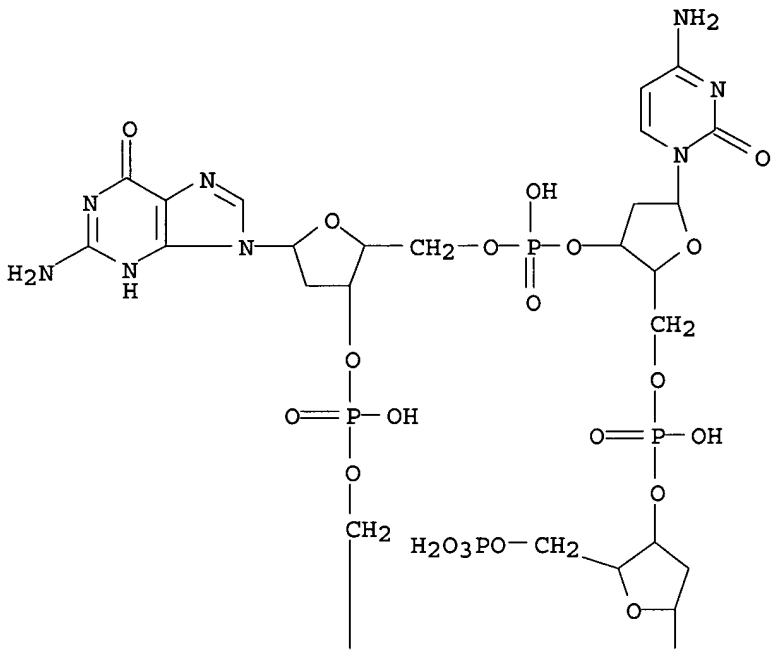

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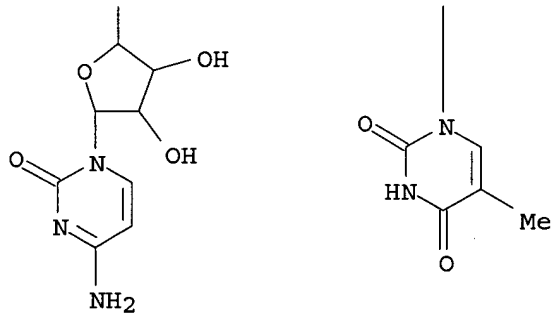
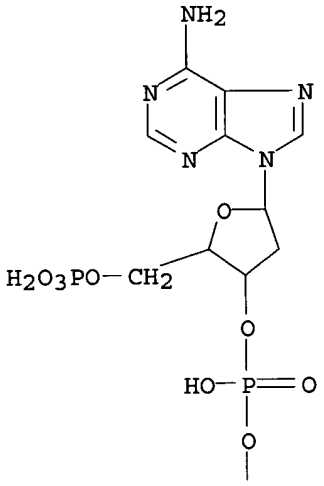
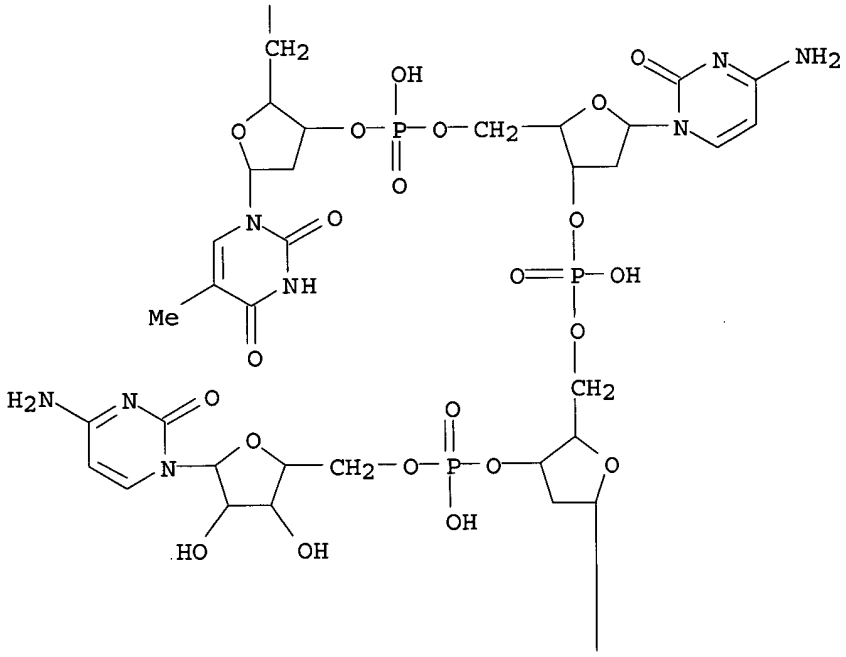


RN 94479-08-0 CAPLUS

CN Cytidine, 2'-deoxy-5'-O-phosphonoadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)





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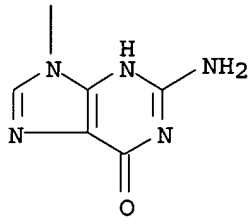

RN 94479-09-1 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-phosphonoadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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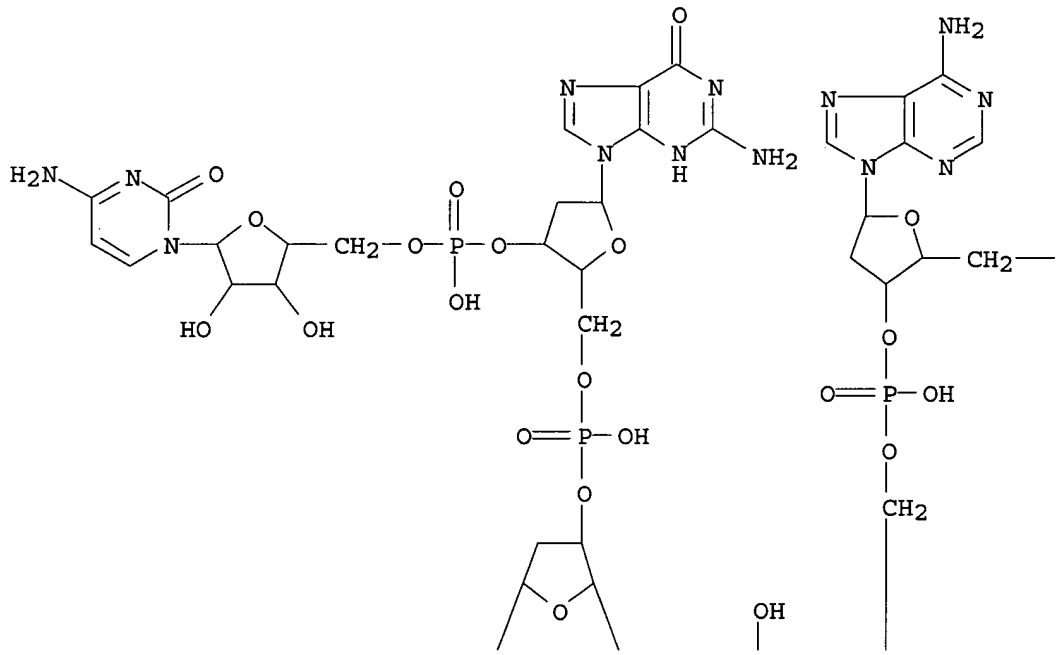

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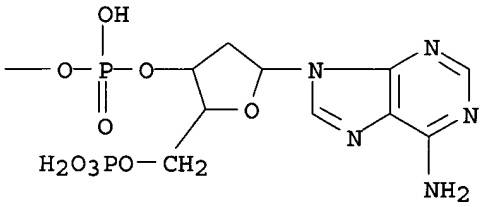
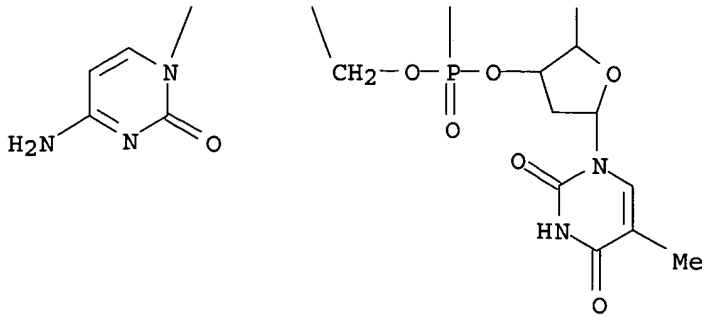
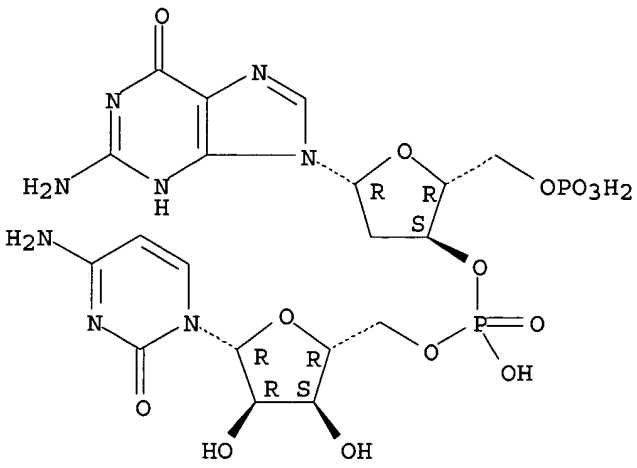




RN 110651-95-1 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-phosphonoguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 110671-51-7 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-phosphonoadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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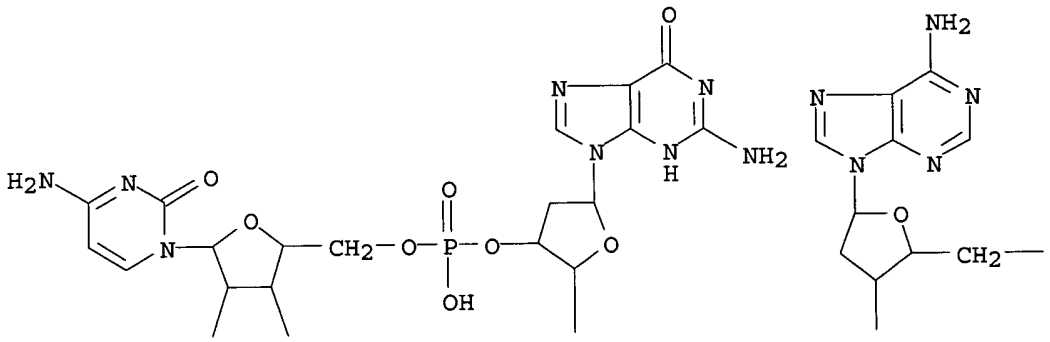

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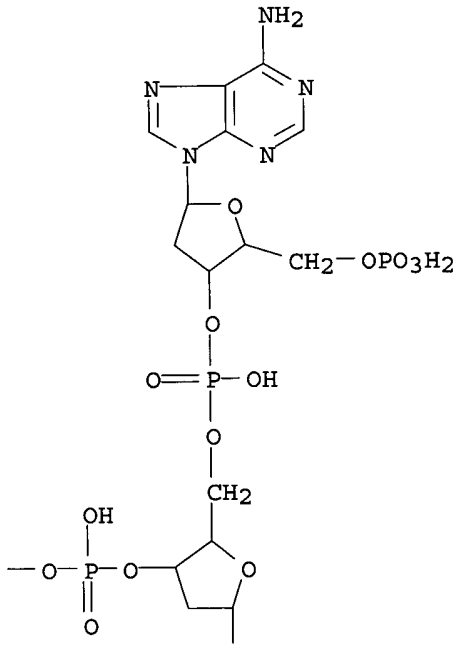

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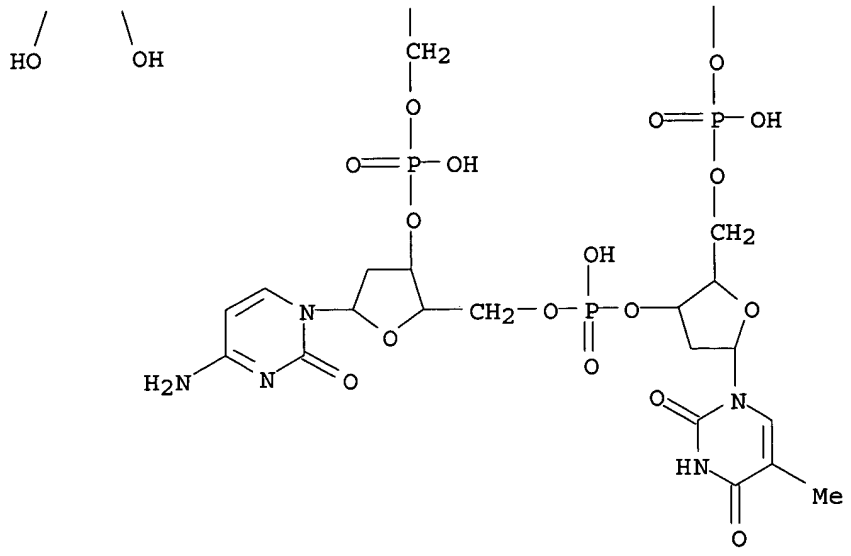

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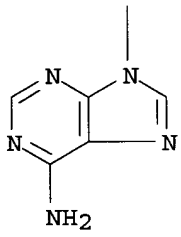

IT **107759-24-0P 107759-25-1P 107759-26-2P**
107787-13-3P 107787-14-4P 107787-15-5P
110651-96-2P 110651-97-3P 110651-98-4P
110651-99-5P 110652-00-1P 110652-01-2P
110652-02-3P 110652-03-4P 110652-04-5P
110671-52-8P 110671-53-9P 110671-54-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and RNA polymerase affinity labeling with)

RN 107759-24-0 CAPLUS

CN Cytidine, 5'-O-[hydroxy(3-methyl-1H-imidazolium-1-yl)phosphinyl]thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')-, inner salt (9CI) (CA INDEX NAME)

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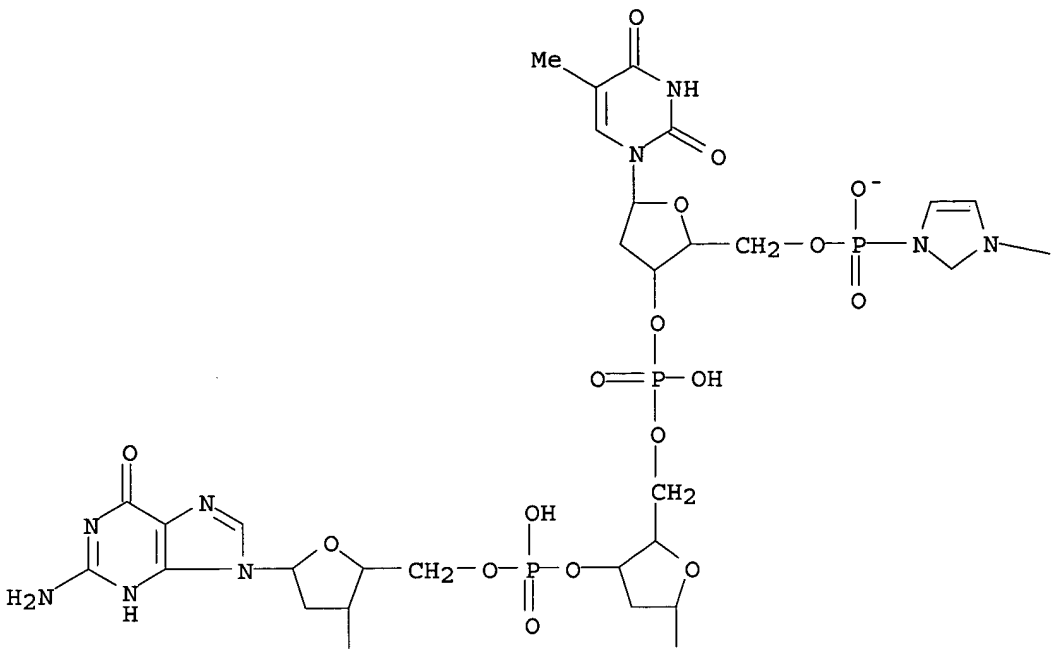

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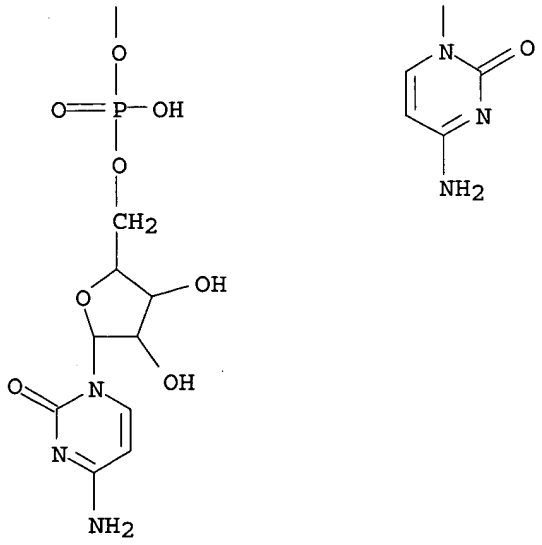
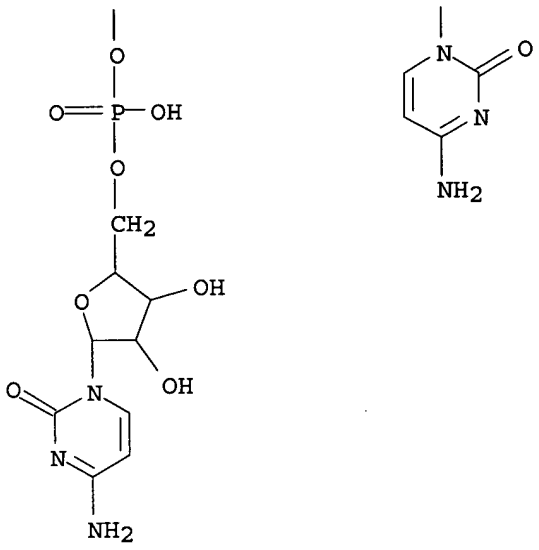
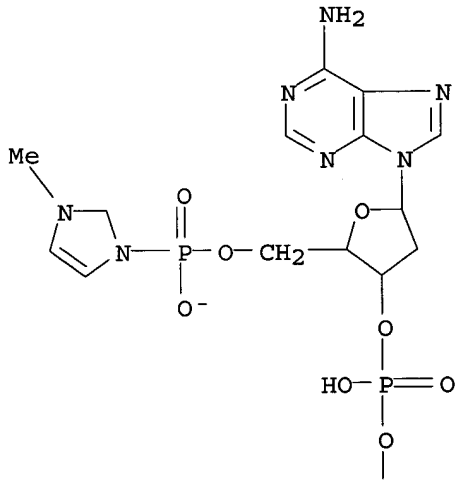




*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 107759-25-1 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-[hydroxy(3-methyl-1H-imidazolium-1-yl)phosphinyl]adenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')-, inner salt (9CI) (CA INDEX NAME)



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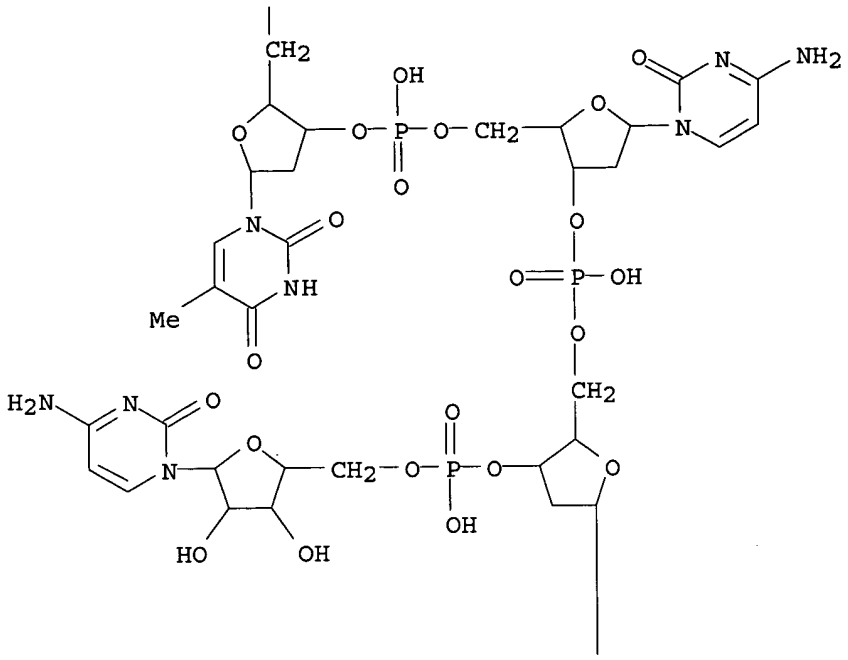

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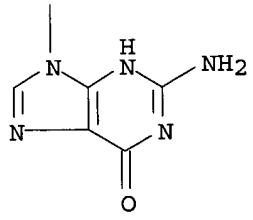

*** FRAGMENT DIAGRAM IS INCOMPLETE ***

RN 107759-26-2 CAPLUS

CN Adenosine, cytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxy-, 5'-[hydrogen (3-methyl-1H-imidazolium-1-yl)phosphonate], inner salt (9CI) (CA INDEX NAME)

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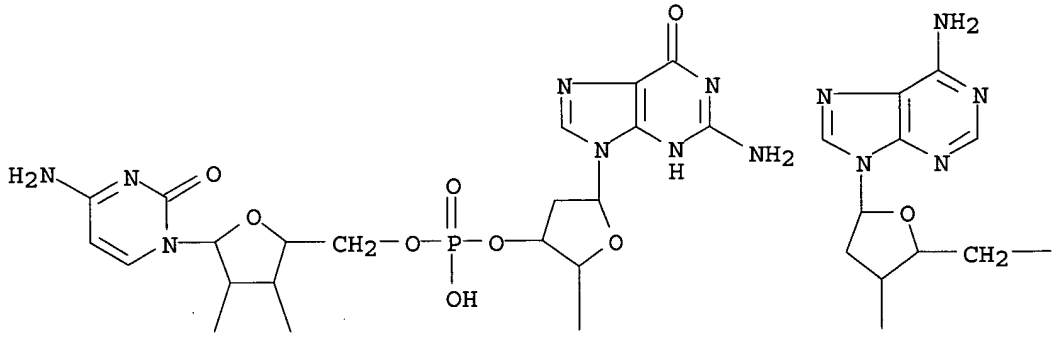

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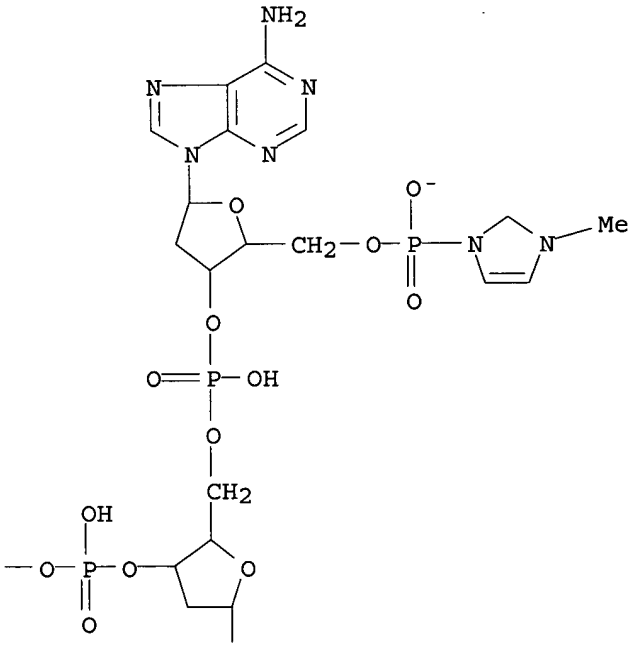

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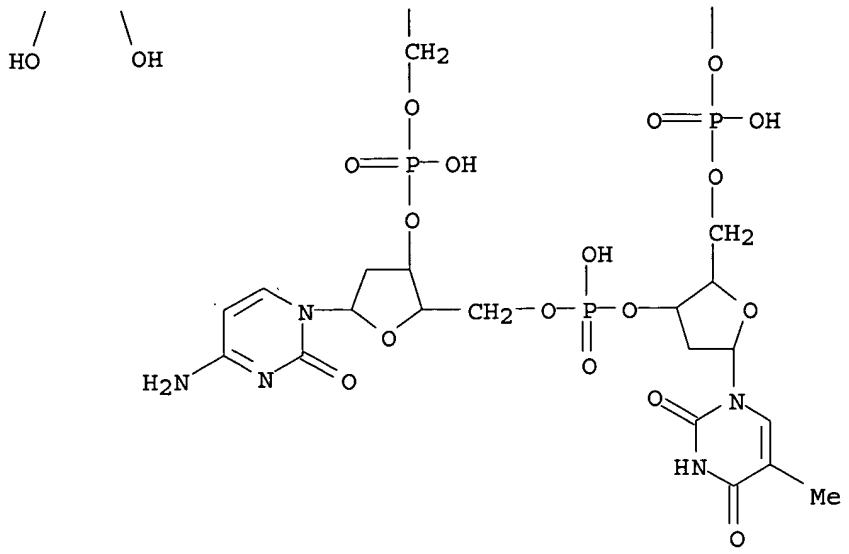

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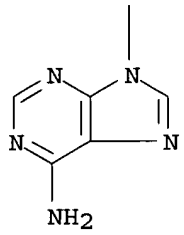

*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 107787-13-3 CAPLUS
CN Cytidine, 5'-O-[hydroxy(3-methyl-1H-imidazolium-1-yl)phosphinyl]guanylyl-(3'.fwdarw.5')-, inner salt (9CI) (CA INDEX NAME)

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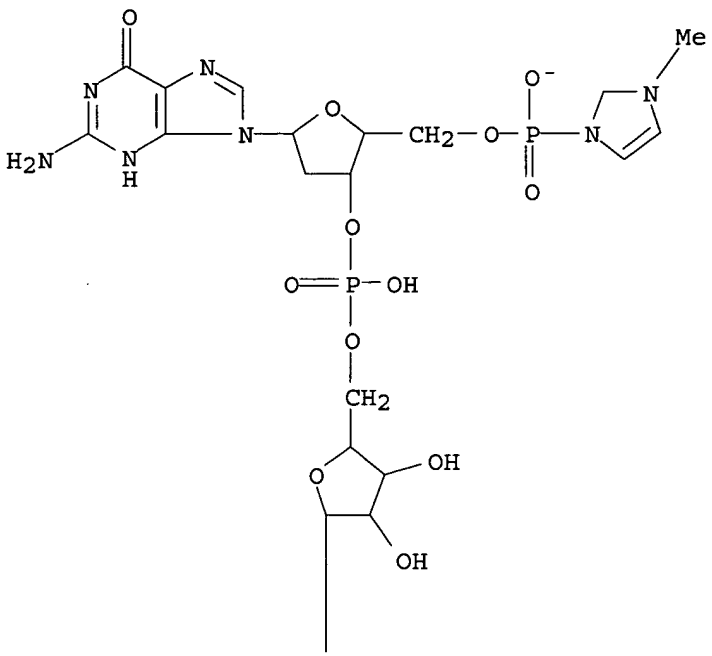

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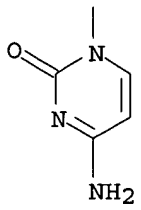

*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 107787-14-4 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-[hydroxy(3-methyl-1H-imidazolium-1-yl)phosphinyl]cytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')-, inner salt (9CI) (CA INDEX NAME)

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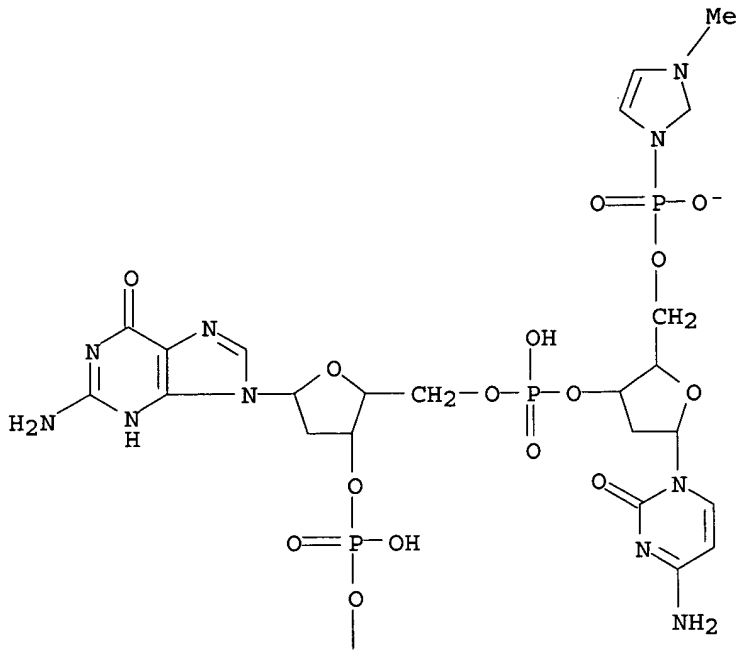

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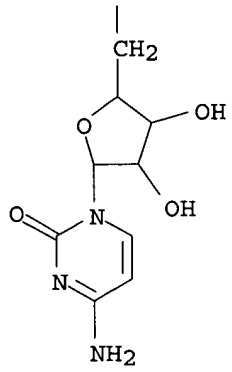

*** FRAGMENT DIAGRAM IS INCOMPLETE ***

RN 107787-15-5 CAPLUS

CN Adenosine, cytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxy-, 5'-[hydrogen (3-methyl-1H-imidazolium-1-yl)phosphonate], inner salt (9CI) (CA INDEX NAME)

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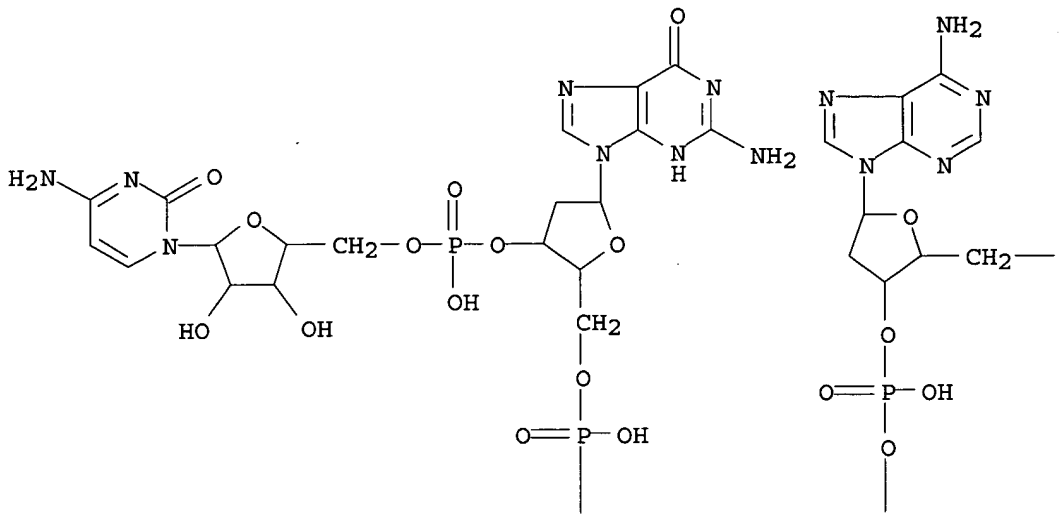

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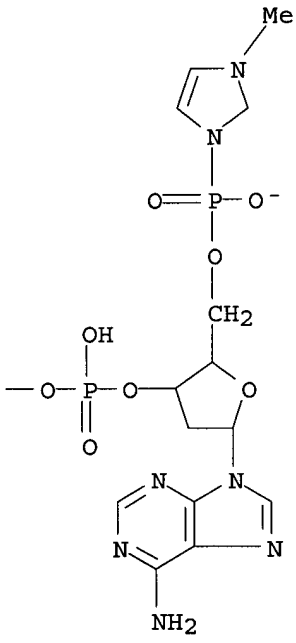

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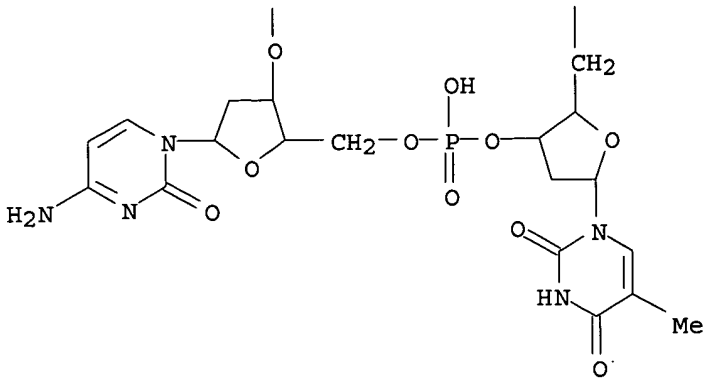

*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 110651-96-2 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-(hydroxy-1H-imidazol-1-ylphosphinyl)guanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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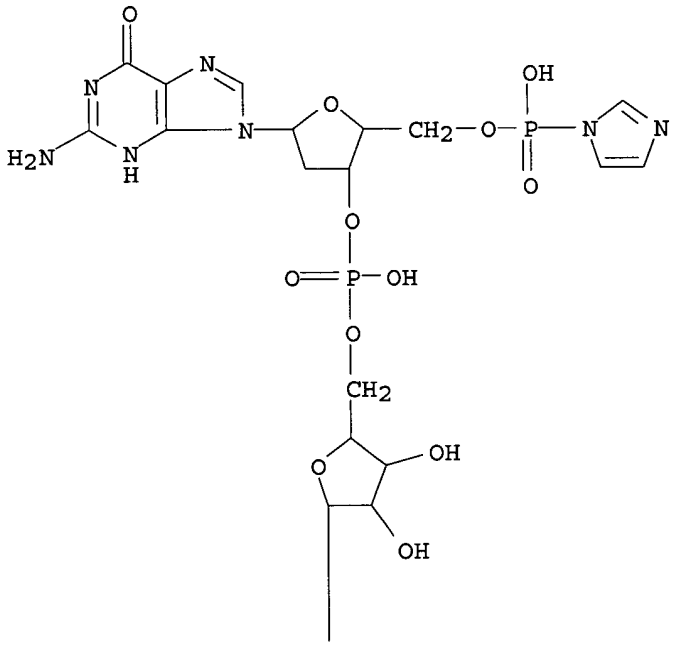

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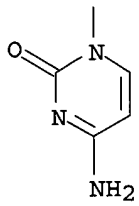

RN 110651-97-3 CAPLUS

CN Cytidine, 2'-deoxy-5'-O-(hydroxy-1H-imidazol-1-ylphosphinyl)cytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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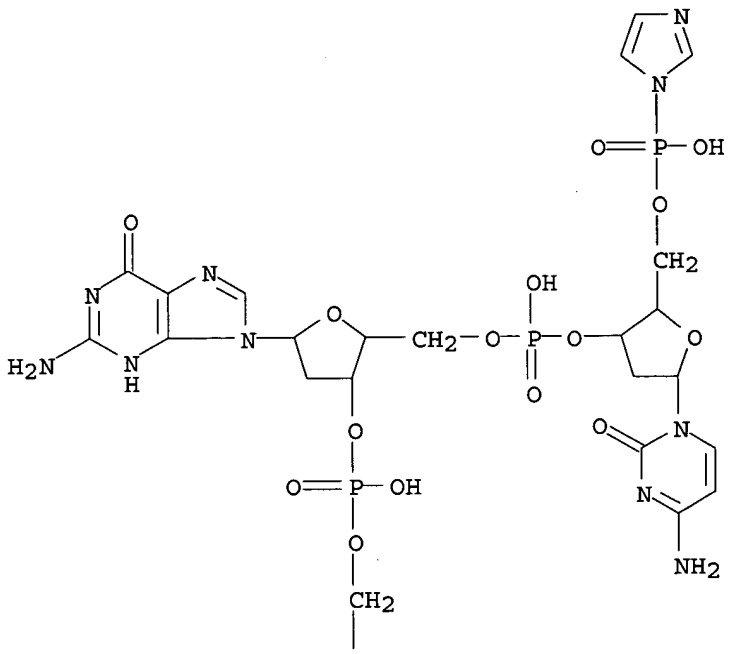

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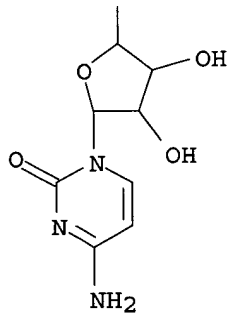

RN 110651-98-4 CAPLUS
CN Cytidine, 5'-O-(hydroxy-1H-imidazol-1-ylphosphinyl)thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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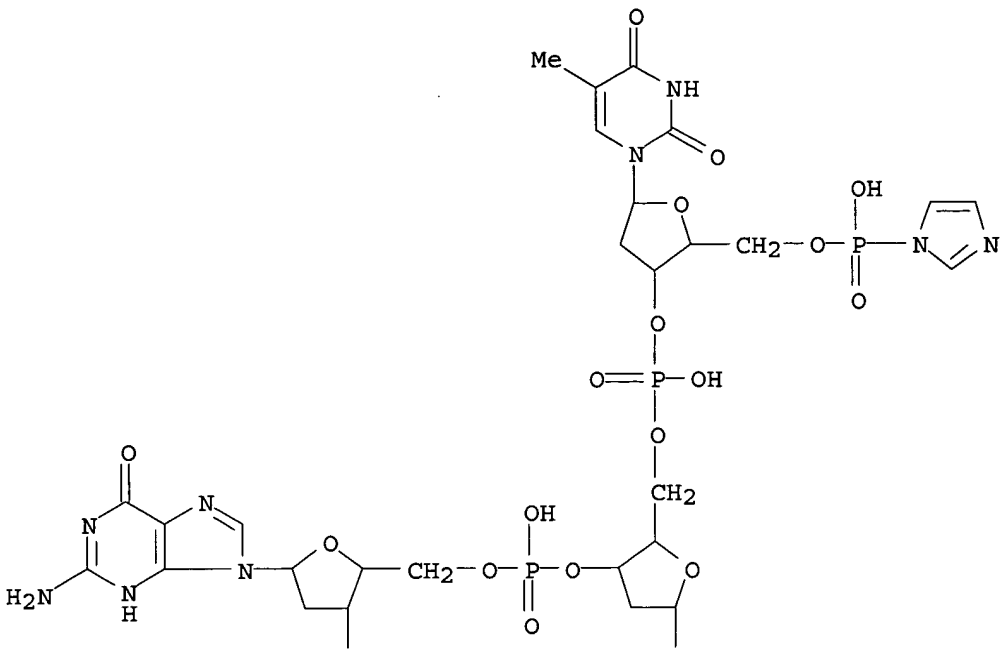

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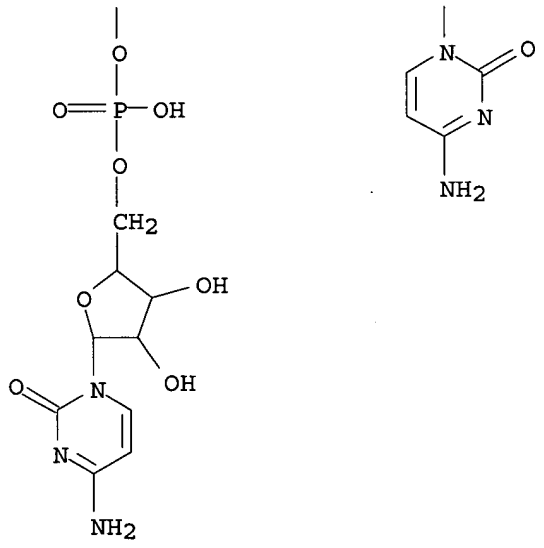
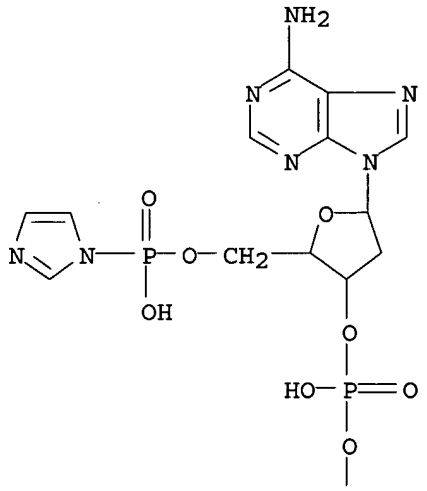
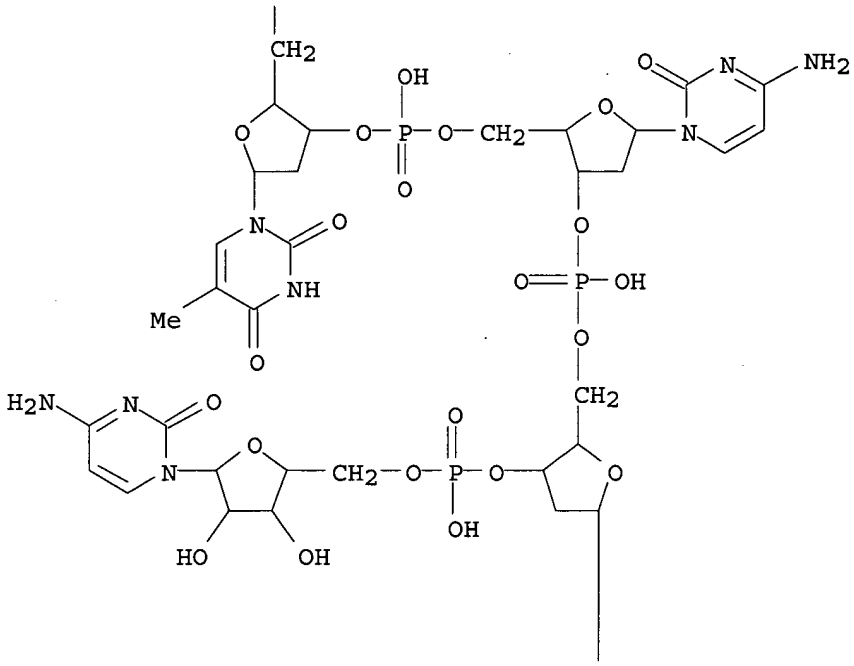


RN 110651-99-5 CAPLUS

CN Cytidine, 2'-deoxy-5'-O-(hydroxy-1H-imidazol-1-ylphosphinyl)adenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)





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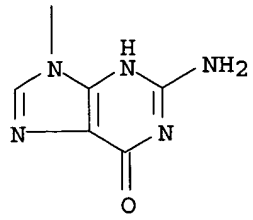

RN 110652-00-1 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-(hydroxy-1H-imidazol-1-ylphosphinyl)adenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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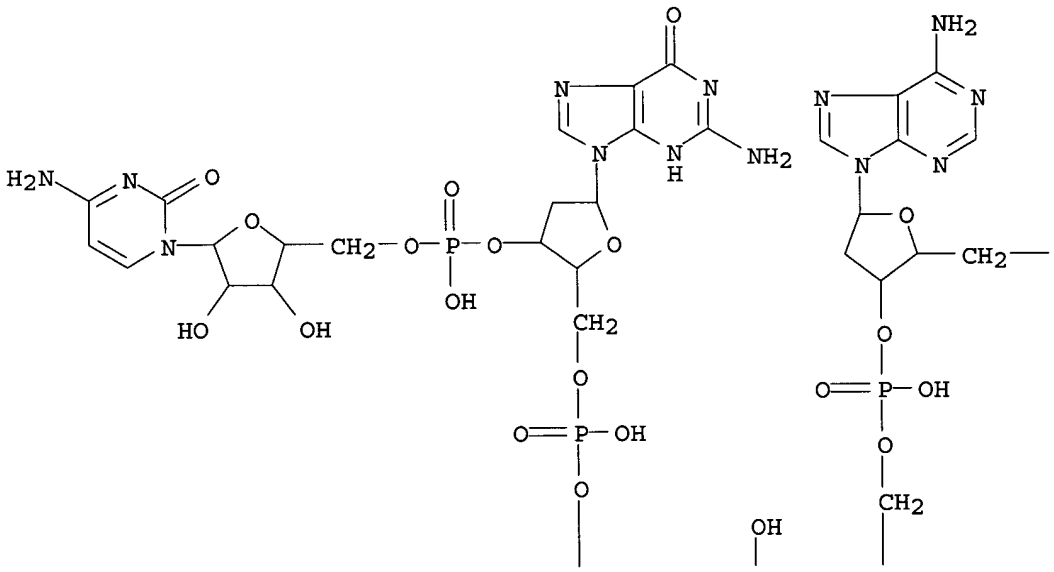

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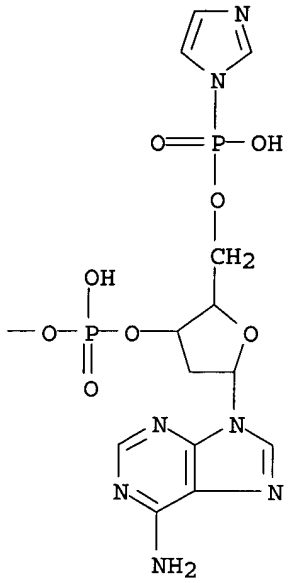

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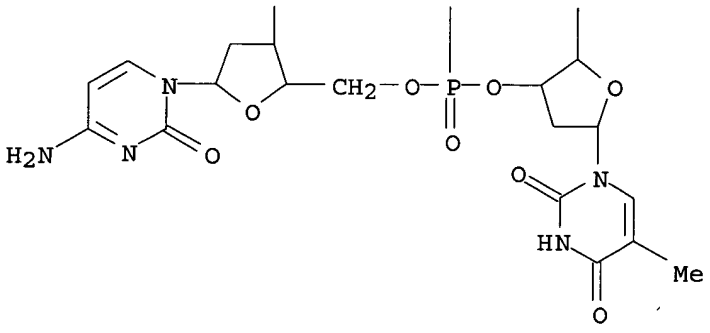

RN 110652-01-2 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-(hydroxy-1H-imidazol-1-ylphosphinyl)adenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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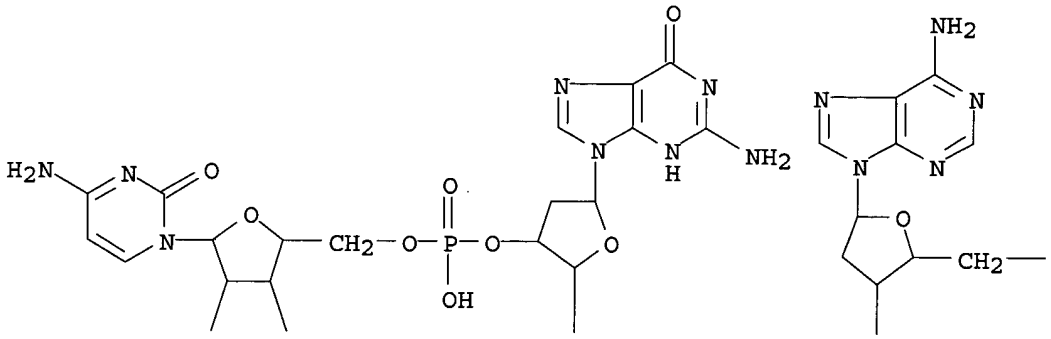
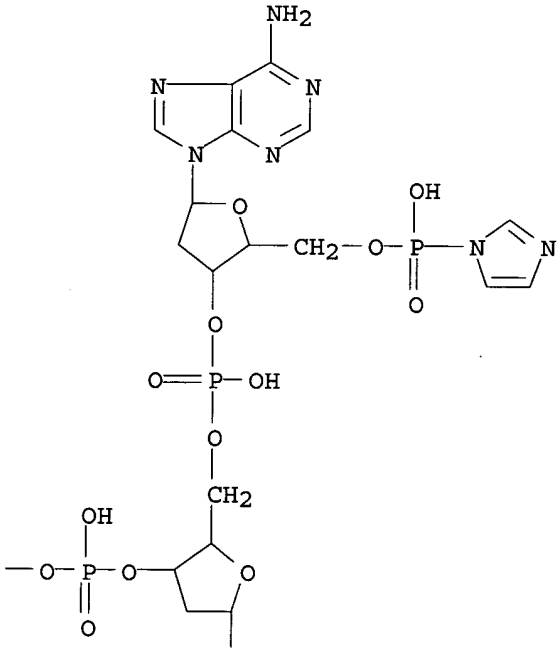
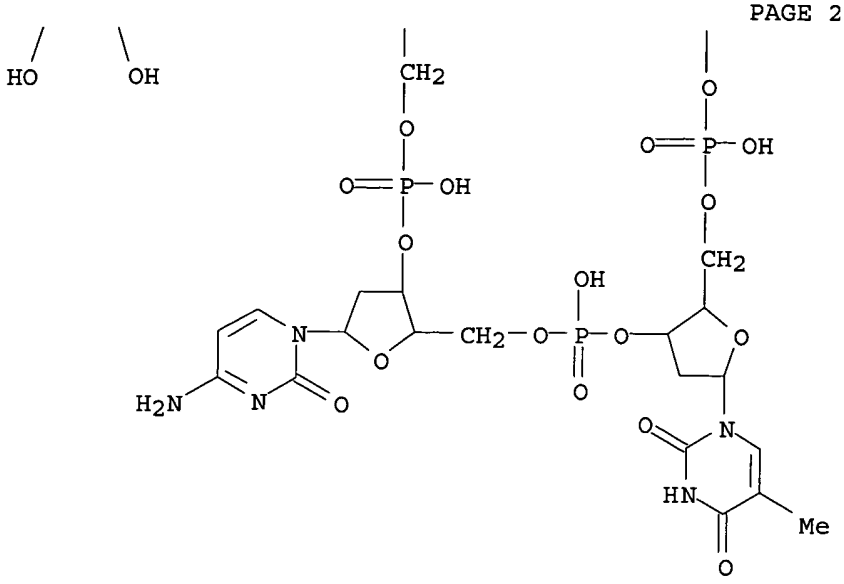


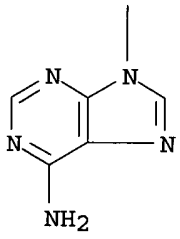
PAGE 1-B



PAGE 2-A

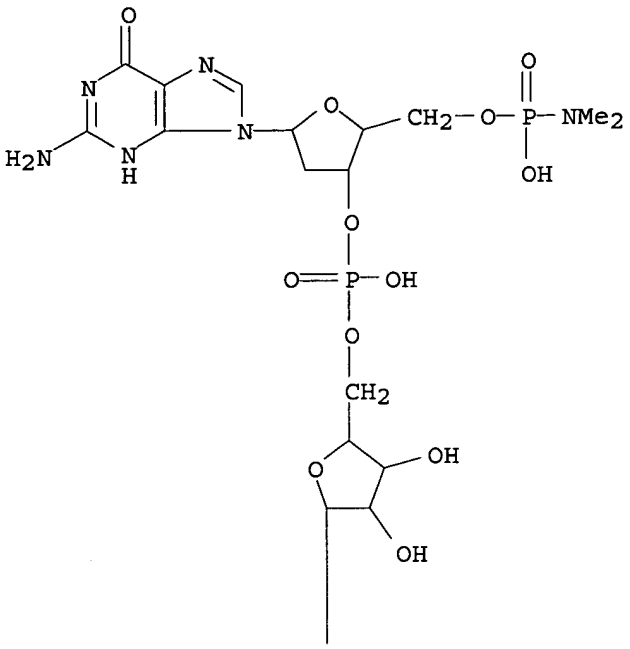


PAGE 2-B



RN 110652-02-3 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-[(dimethylamino)hydroxyphosphinyl]guanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

PAGE 1-A



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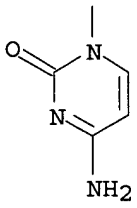

RN 110652-03-4 CAPLUS

CN Cytidine, 2'-deoxy-5'-O-[(dimethylamino)hydroxyphosphinyl]adenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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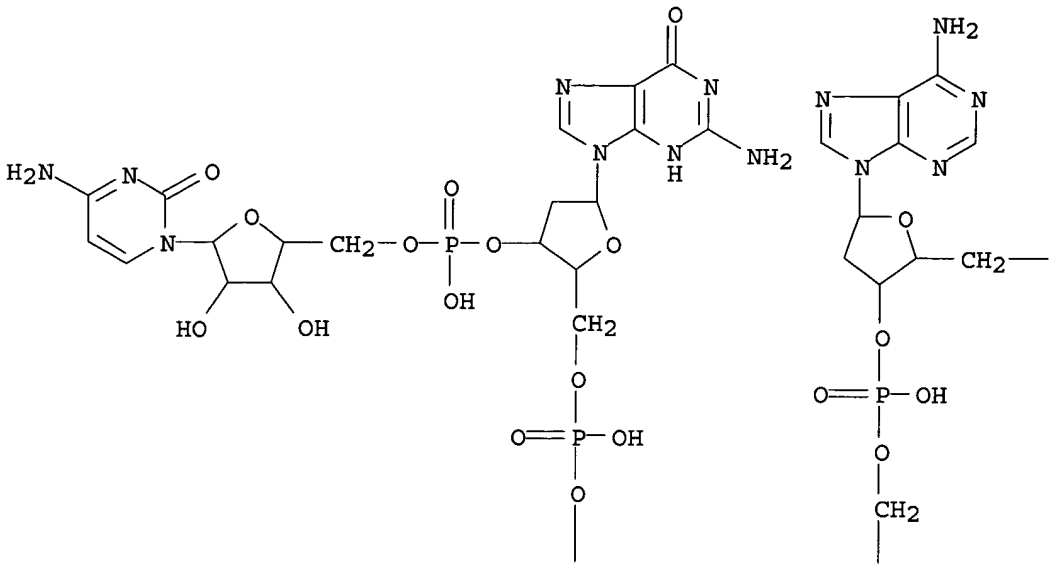

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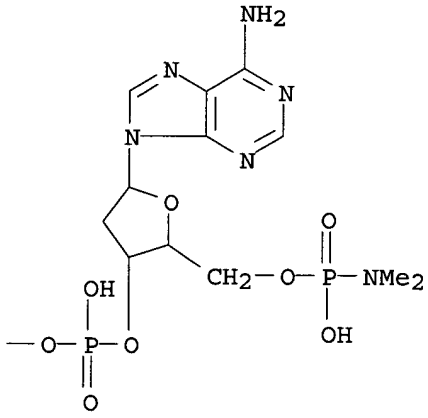

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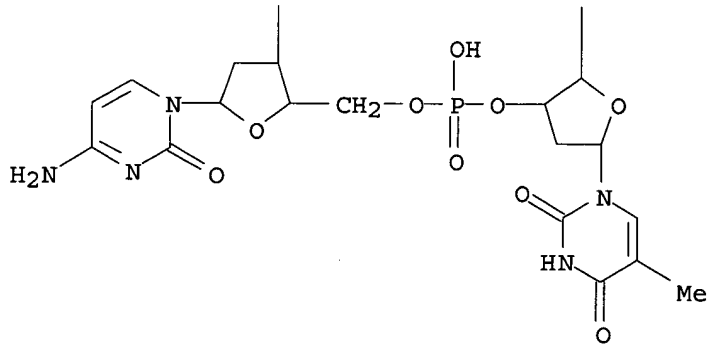

RN 110652-04-5 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-[(dimethylamino)hydroxyphosphinyl]adenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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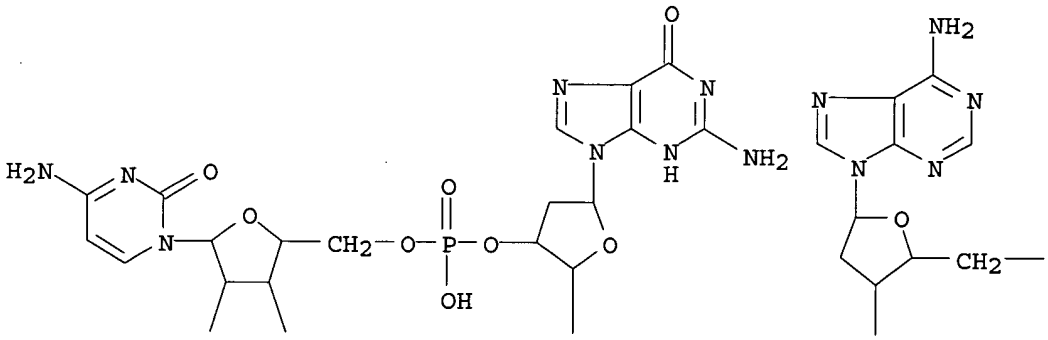

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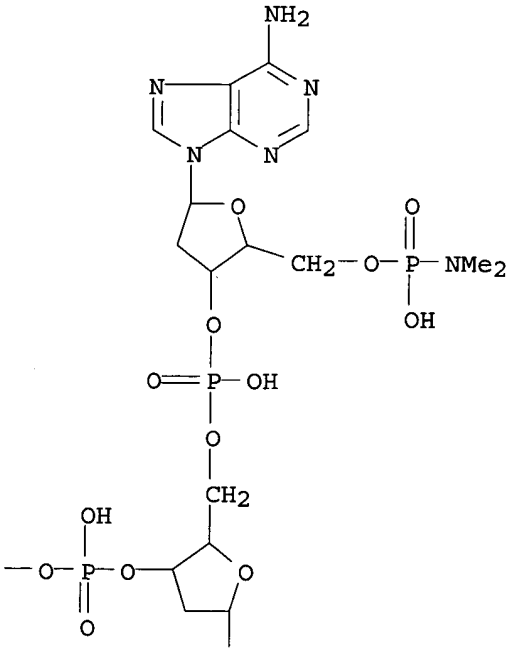

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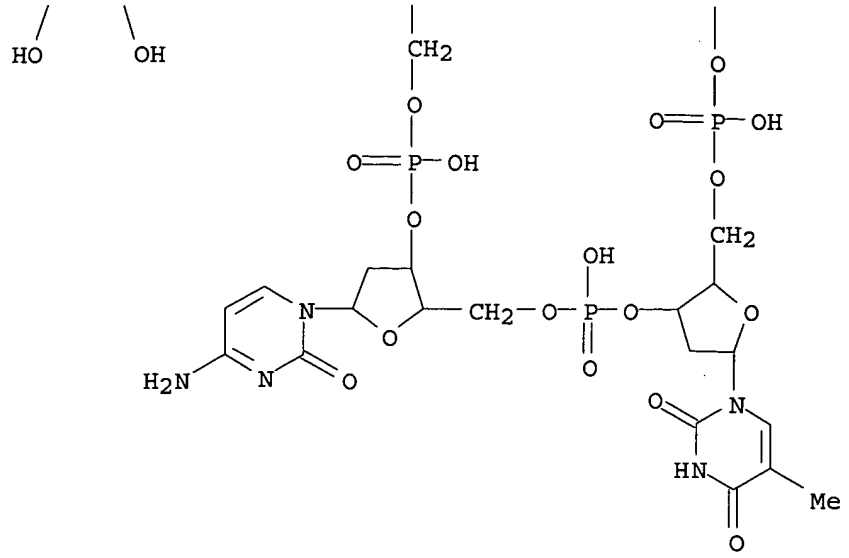
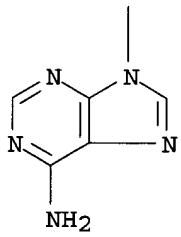


PAGE 2-B



RN 110671-52-8 CAPLUS
CN Cytidine, 2'-deoxy-5'-O-[(dimethylamino)hydroxyphosphinyl]cytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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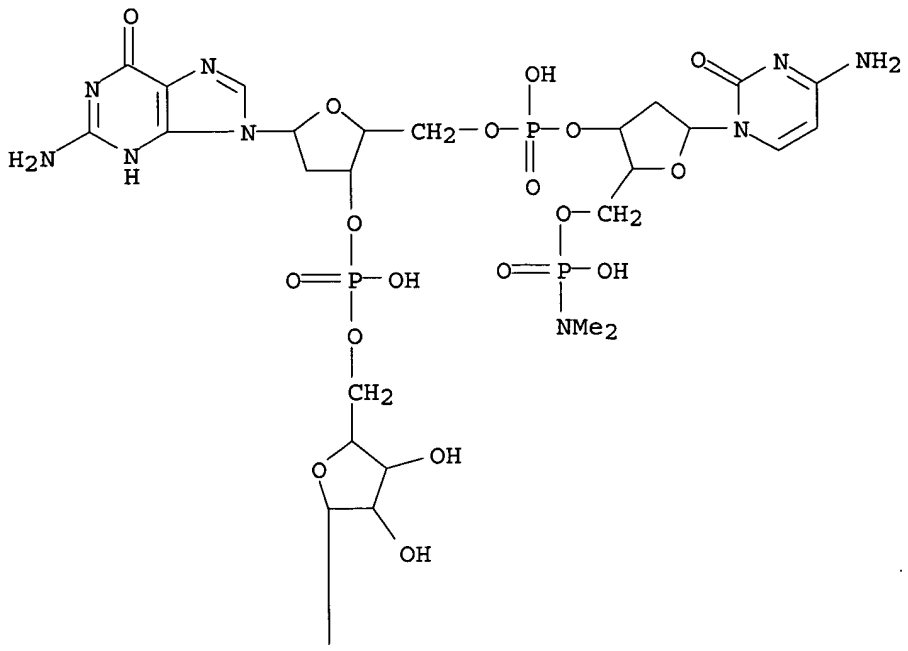

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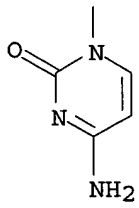

RN 110671-53-9 CAPLUS
CN Cytidine, 5'-O-[(dimethylamino)hydroxyphosphinyl]thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

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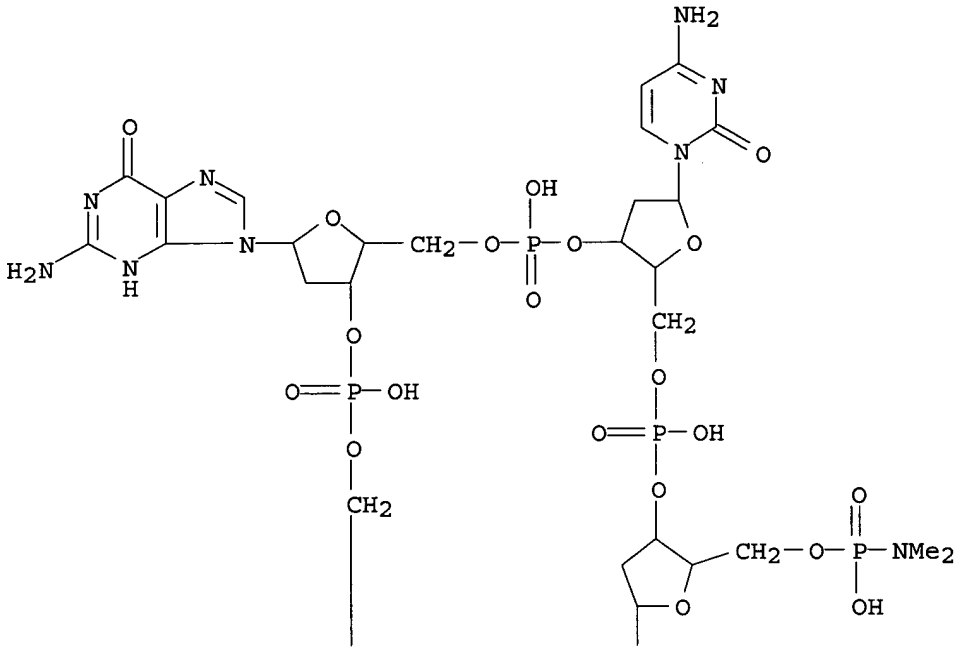

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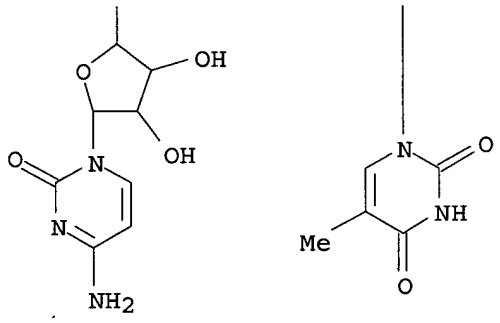
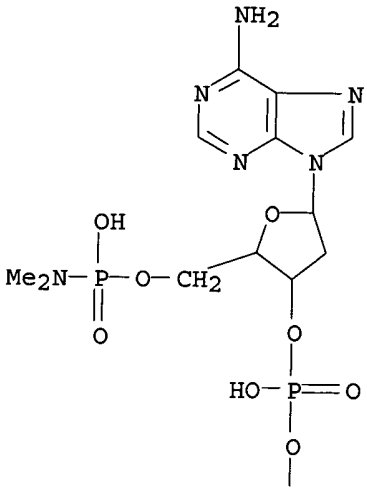
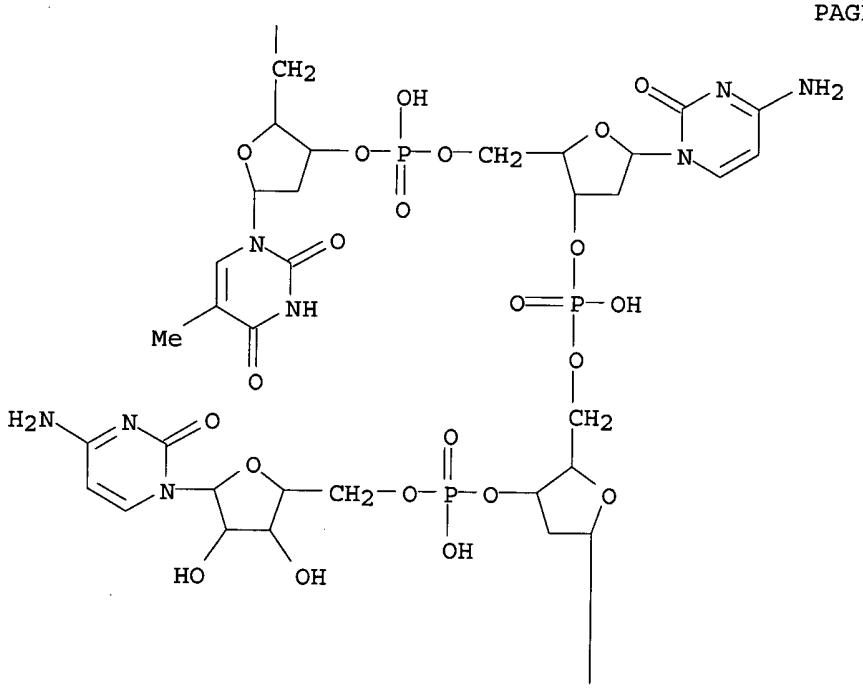
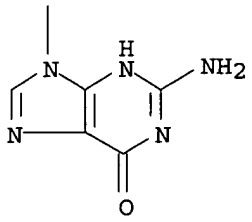


RN 110671-54-0 CAPLUS

CN Cytidine, 2'-deoxy-5'-O-[(dimethylamino)hydroxyphosphinyl]adenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')- (9CI) (CA INDEX NAME)

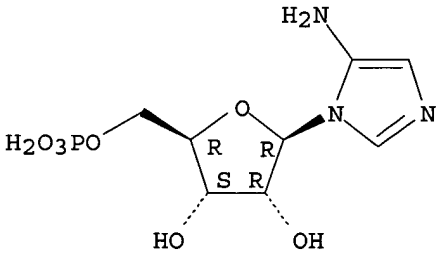






L6 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1984:420330 CAPLUS
DN 101:20330
TI Biosynthesis of thiamin: 5-aminoimidazole ribotide as the precursor of all the carbon atoms of the pyrimidine moiety
AU Estramareix, Bernard; Therisod, Michel
CS Lab. Chim. Org. Multifonct., Univ. Paris-Sud, Orsay, 91405, Fr.
SO J. Am. Chem. Soc. (1984), 106(13), 3857-60
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
AB Three C atoms of the pyrimidine moiety of thiamin originate in the **imidazole** ring of 5-aminoimidazole ribotide (AIR) in bacteria. The origin of the other 3 C atoms was examd. with labeled biosynthetic samples of 5-aminoimidazole riboside (AIRs). The incorporation of **label** was studied in a Salmonella typhimurium strain able to synthesize the pyrimidine part of thiamin from glucose and a minute amt. of AIRs. No incorporation of 13C was found in the pyrimidine synthesized from [U-13C]glucose and natural AIRs. In contrast, the isotopic compn. of the pyrimidine synthesized from natural glucose and [U-13C]AIRs was close to that of the labeled AIRs. From AIRs labeled mainly in its ribose part with 14C and inactive glucose, a pyrimidine labeled mainly in the 3 C atoms that do not derive from the **imidazole** part was obtained. These C atoms were approx. as radioactive as those of the ribose part of AIRs. It was concluded that the 3 C atoms of the pyrimidine moiety of thiamin originate in the ribose part of AIRs, which is, thus, the precursor of all the C atoms of this pyrimidine.
IT **25635-88-5**
RL: BIOL (Biological study)
(thiamin pyrimidine moiety carbon atoms derived from)
RN 25635-88-5 CAPLUS
CN 1H-Imidazol-5-amine, 1-(5-O-phosphono-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1983:194610 CAPLUS
DN 98:194610
TI Quantitative determination of adenosine

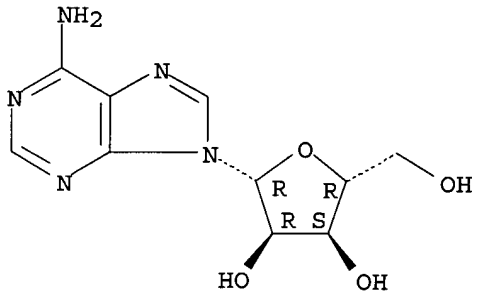
IN Sato, Tomokazu; Ui, Michio
PA Yamasa Shoyu Co., Ltd. , Japan
SO Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 70033	A1	19830119	EP 1982-106276	19820713
	EP 70033	B1	19841121		
	R: CH, DE, FR, GB, LI				
	JP 58011857	A2	19830122	JP 1981-111324	19810715
	JP 62057220	B4	19871130		
	US 4478934	A	19841023	US 1982-396863	19820709
	CA 1177750	A1	19841113	CA 1982-407254	19820714
PRAI	JP 1981-111324		19810715		

AB An accurate and sensitive immunoassay is described for the detn. of adenosine in biol. fluids following its conversion to 2',3'-diacyladenosine (by an acid anhydride in the presence of an org. tert-amine) by using antibodies specific for 2',3'-diacyladenosine and labeled 2',3'-diacyladenosine. The antibodies were prepd. by inoculation of an animal with an antigen consisting of the condensation product of 2',3'-diacyladenosine and a carrier protein (e.g. human serum albumin) via dicarboxylic acid residues. Thus, adenosine was detd. in rat plasma treated with MnCl2 and benzyl alc. by a RIA. An acetylating agent consisting of succinic anhydride and triethylamine was added to the sample and stds., followed by diln. with **imidazole** buffer (pH 5-8), mixing with a predetd. amt. of 2',3'-disuccinyladenosine-3H and prepd. antibodies (sol. or immobilized), sepn. of bound and free **label** with dextran-coated carbon, and radioactivity detn.

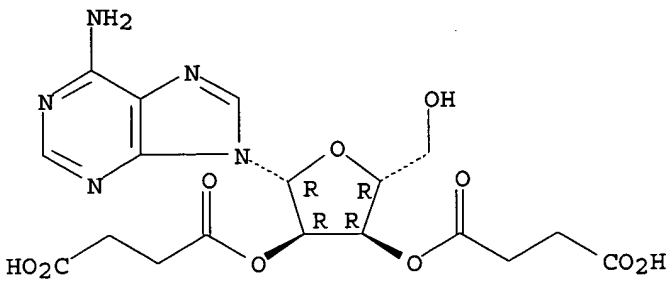
IT **58-61-7**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in biol. fluids by immunoassay)
RN 58-61-7 CAPLUS
CN Adenosine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **84872-85-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for adenosine detn. in body fluids by immunoassay)
RN 84872-85-5 CAPLUS
CN Adenosine, 2',3'-bis(hydrogen butanedioate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1983:122427 CAPLUS
DN 98:122427
TI Stabilization of glucose oxidase apoenzyme
IN Rupchock, Patricia A.; Tyhach, Richard J.
PA Miles Laboratories, Inc. , USA
SO U.S., 17 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4366243	A	19821228	US 1981-255310	19810417

AB Glucose oxidase apoenzyme is stabilized by poly(vinyl alc.) and serum albumin for ligand binding assays. The stabilized apoenzyme can be incorporated into test strips for immunoassays. In such assays an FAD-antigen conjugate is the **label**, and FAD-antigen conjugate which is not bound to the antibody is available for glucose oxidase apoenzyme activation. For example, test strips were prepd. for dinitrophenyl caproate immunoassay which contained buffer, a glucose oxidase detection system, apoglucose oxidase, dinitrophenol antibody, and dinitrophenol-FAD conjugate. Inclusion of poly(vinyl alc.) and albumin increased the heat stability of the test strips. Test strips for theophylline and phenytoin are also described.

IT **76748-73-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with dinitrofluorobenzene)

RN 76748-73-7 CAPLUS
CN Riboflavin 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with N-(6-aminohexyl)adenosine (9CI) (CA INDEX NAME)

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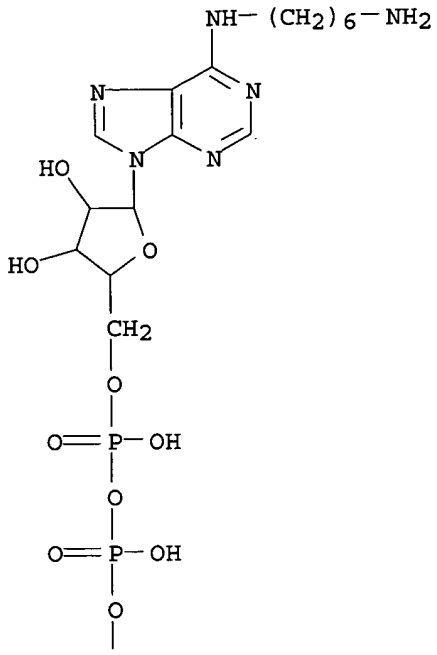

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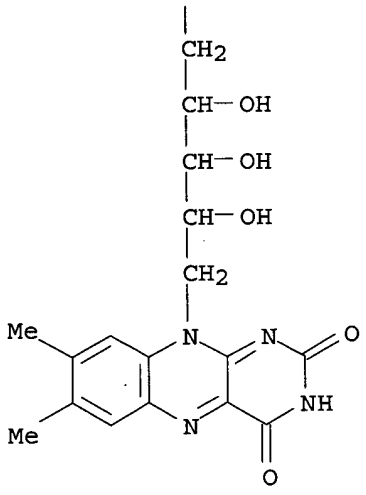
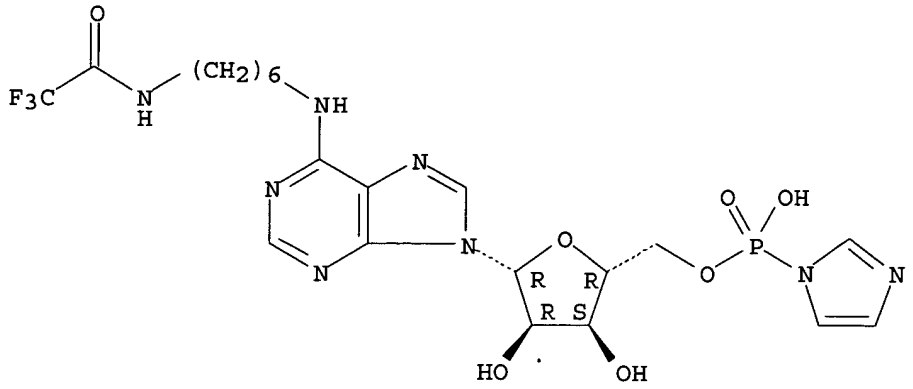


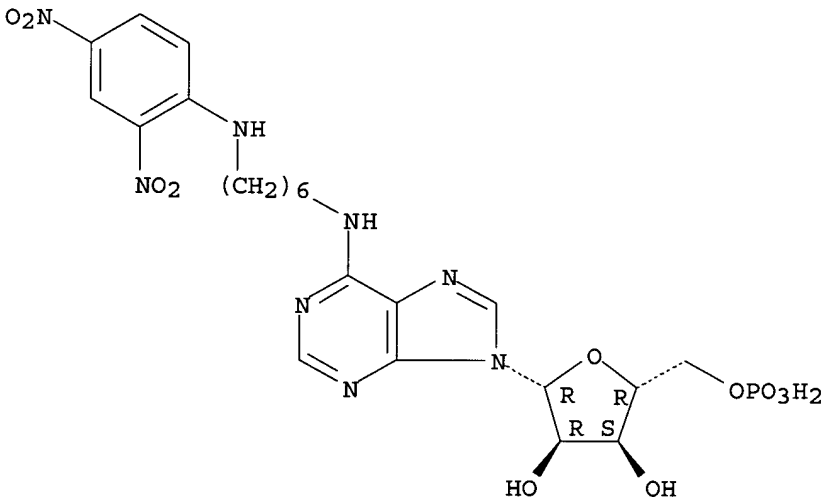
IT **73122-00-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with riboflavin monophosphate)
RN 73122-00-6 CAPLUS
CN Adenosine, N-[6-[(trifluoroacetyl)amino]hexyl]-, 5'-(hydrogen 1H-imidazol-1-ylphosphonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



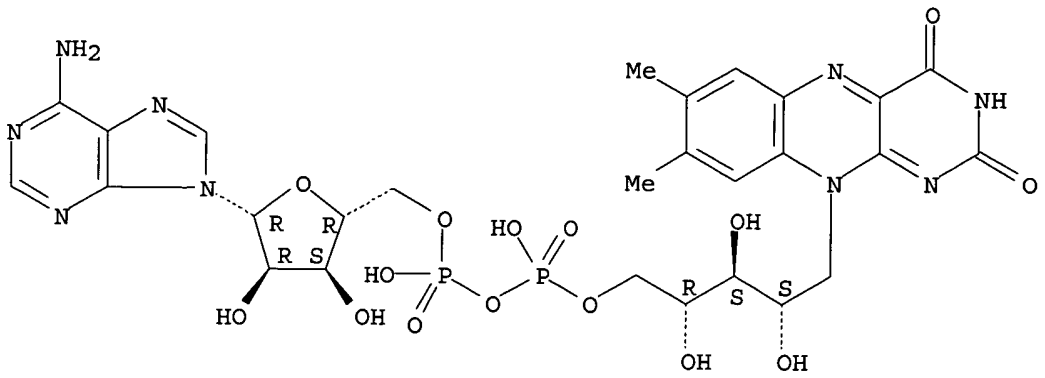
IT **82604-51-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as **label** for amino assay with apoglucose oxidase)
RN 82604-51-1 CAPLUS
CN 5'-Adenylic acid, N-[6-[(2,4-dinitrophenyl)amino]hexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



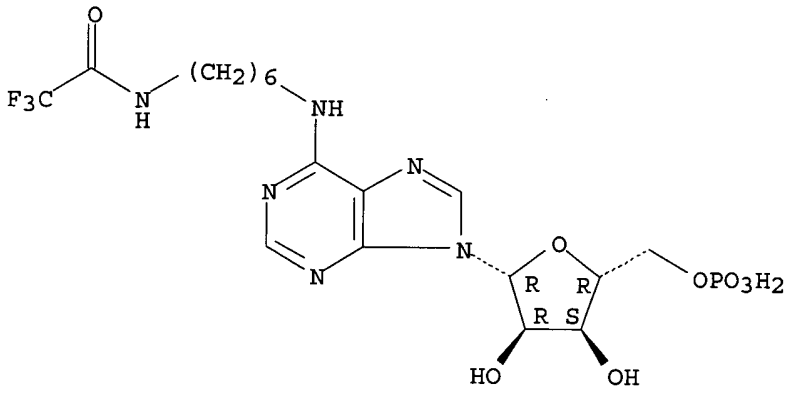
IT **146-14-5DP**, reaction products with antigens
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as **label** for immunoassay with stabilized apoglucose oxidase)
RN 146-14-5 CAPLUS
CN Riboflavin 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with adenosine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **66060-76-2**
RL: RCT (Reactant)
(reaction of, with carbonyldiimidazole)
RN 66060-76-2 CAPLUS
CN 5'-Adenylic acid, N-[6-[(trifluoroacetyl)amino]hexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1982:452162 CAPLUS
DN 97:52162
TI Homogeneous specific binding assay device and an analytical method using the device
IN Greenquist, Alfred C.; Li, Thomas M.; Rupchock, Patricia A.; Tyhach, Richard Joseph; Walter, Bert
PA Miles Laboratories, Inc., USA
SO Eur. Pat. Appl., 93 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 51213	A1	19820512	EP 1981-108681	19811022
	EP 51213	B1	19870325		
	R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	CA 1183450	A1	19850305	CA 1981-381675	19810714
	IL 63333	A1	19860131	IL 1981-63333	19810716
	IL 74590	A1	19860131	IL 1981-74590	19810716
	IL 74591	A1	19860131	IL 1981-74591	19810716
	ZA 8104949	A	19820929	ZA 1981-4949	19810720

	AU 8175047	A1	19820610	AU 1981-75047	19810908
	AU 530707	B2	19830728		
	NO 8103483	A	19820503	NO 1981-3483	19811015
	NO 161703	B	19890605		
	NO 161703	C	19890913		
	AT 26187	E	19870415	AT 1981-108681	19811022
	FI 8103369	A	19820501	FI 1981-3369	19811028
	FI 75677	B	19880331		
	FI 75677	C	19880711		
	DK 8104784	A	19820501	DK 1981-4784	19811029
	DK 157328	B	19891211		
	DK 157328	C	19900507		
	JP 57103055	A2	19820626	JP 1981-172169	19811029
	JP 02035261	B4	19900809		
	ES 506689	A1	19830401	ES 1981-506689	19811029
	ES 518735	A1	19840201	ES 1982-518735	19821231
	ES 518736	A1	19840201	ES 1982-518736	19821231
	ES 518737	A1	19840201	ES 1982-518737	19821231
	ES 518738	A1	19840201	ES 1982-518738	19821231
	ES 518739	A1	19840201	ES 1982-518739	19821231
	US 4668619	A	19870526	US 1984-632946	19840720
PRAI	US 1980-202378		19801030		
	IL 1981-63333		19810716		
	EP 1981-108681		19811022		
	US 1982-381218		19820524		

AB A binding assay test element is described (e.g., for antibody or antigen immunoassays) which has a solid carrier (e.g., paper, polymeric film, or gel) impregnated with reagents. The assay systems include those involving enzyme substrate labels, enzyme prosthetic group labels, and enzyme labels. A detectable response (e.g., luminescent, fluorescent, spectrophotometric, or colorimetric) is producted which is a function of the amt. of analyte. Examples include theophylline detn. with theophylline-FAD conjugate as **label** and glucose oxidase apoenzyme, galactosyl-umbelliferone-theophylline conjugate as **label** and .beta.-galactosidase, and glucose 6-phosphate dehydrogenase-theophylline conjugate as **label**. Further examples include detns. of N-(2,4-dinitrophenyl)-.epsilon.-aminocaproic acid and other drugs.

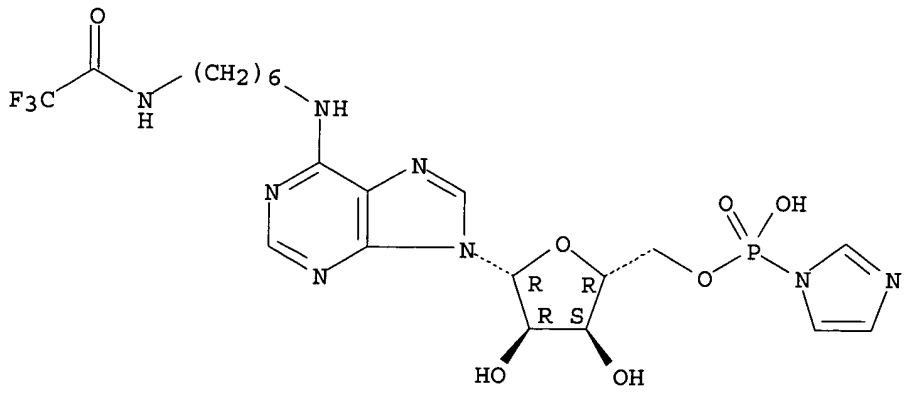
IT **73122-00-6P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with riboflavin monophosphate)

RN 73122-00-6 CAPLUS

CN Adenosine, N-[6-[(trifluoroacetyl)amino]hexyl]-, 5'-(hydrogen 1H-imidazol-1-ylphosphonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



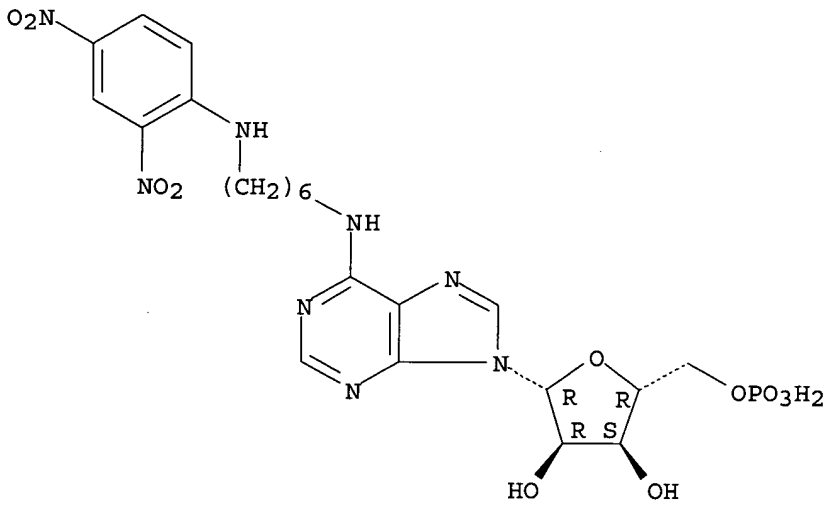
IT **82604-51-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as **label** for dinitrophenylaminocaproic acid immunoassay)

RN 82604-51-1 CAPLUS

CN 5'-Adenylic acid, N-[6-[(2,4-dinitrophenyl)amino]hexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



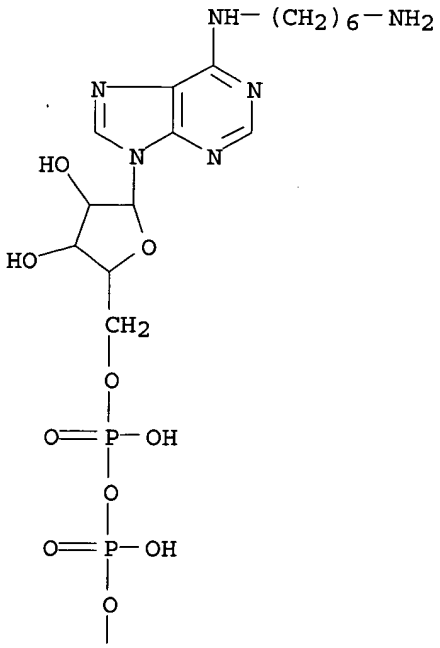
IT **76748-73-7DP**, reaction products with antigens

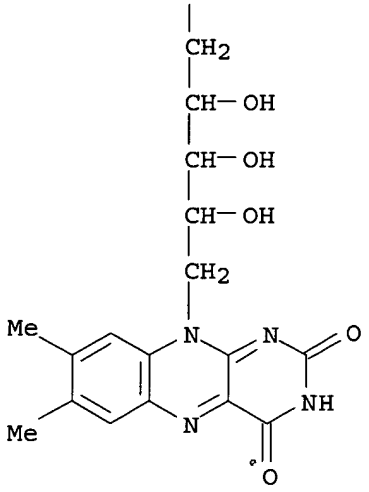
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for immunoassay)

RN 76748-73-7 CAPLUS

CN Riboflavin 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with N-(6-aminohexyl)adenosine (9CI) (CA INDEX NAME)

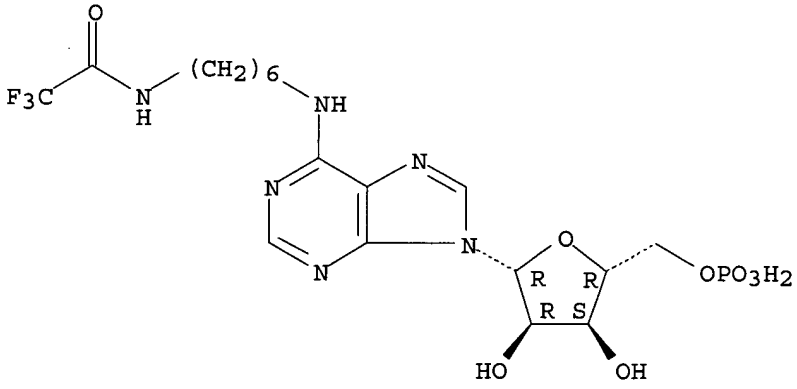
PAGE 1-A





IT **66060-76-2**
RL: RCT (Reactant)
(reaction of, with carbonyldiimidazole)
RN 66060-76-2 CAPLUS
CN 5'-Adenylic acid, N-[6-[(trifluoroacetyl)amino]hexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1982:196189 CAPLUS
DN 96:196189
TI Homogeneous specific binding assay employing an intramolecularly modulated photogenic enzyme substrate **label**
IN Burd, John F.; Li, Thomas M.
PA Miles Laboratories, Inc. , USA
SO U.S., 14 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 4318981 A 19820309 US 1980-143497 19800424

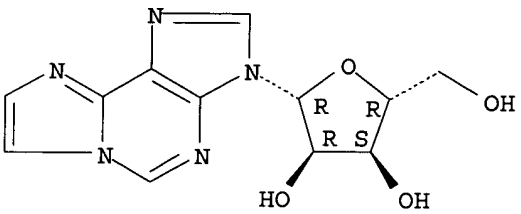
AB Binding assays (e.g., immunoassays) are described that use a labeled conjugate which is cleavable by an enzyme to produce an indicator which emits light. The **label** component of the labeled conjugate consists of a photophore, a linkage which is cleavable by an enzyme, a modulator for light emission by the photophore, and a linking group through which the **label** component is bound to the rest of the conjugate. An example is given of fluorescence immunoassay of theophylline with FAD-theophylline as labeled conjugate and nucleotide pyrophosphatase as enzyme. The flavin portion of FAD serves as fluorescer, the adenosine moiety of FAD serves as quencher, and the pyrophosphate linking group in FAD serves as enzyme-cleavable linkage.

IT **39007-51-7**
RL: ANST (Analytical study)
(as fluorescing agent, in fluorescence binding assay with enzyme substrate labels)

RN 39007-51-7 CAPLUS

CN 3H-Imidazo[2,1-i]purine, 3-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

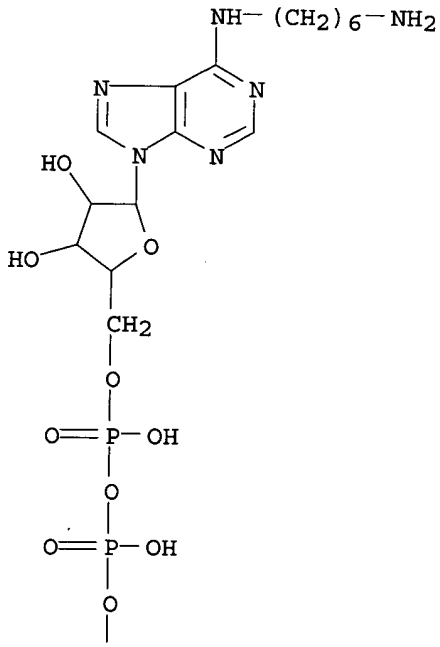
Absolute stereochemistry.



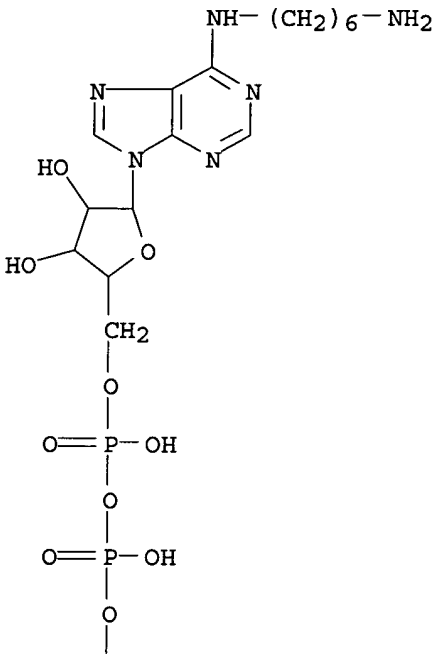
IT **76748-73-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with dimethyltetrahydropyridopurinetrione)

RN 76748-73-7 CAPLUS

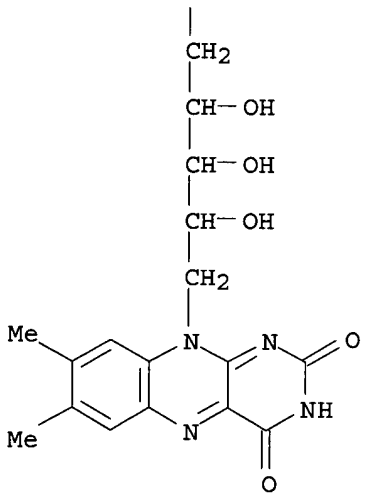
CN Riboflavin 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with N-(6-aminohexyl)adenosine (9CI) (CA INDEX NAME)



PAGE 1-A

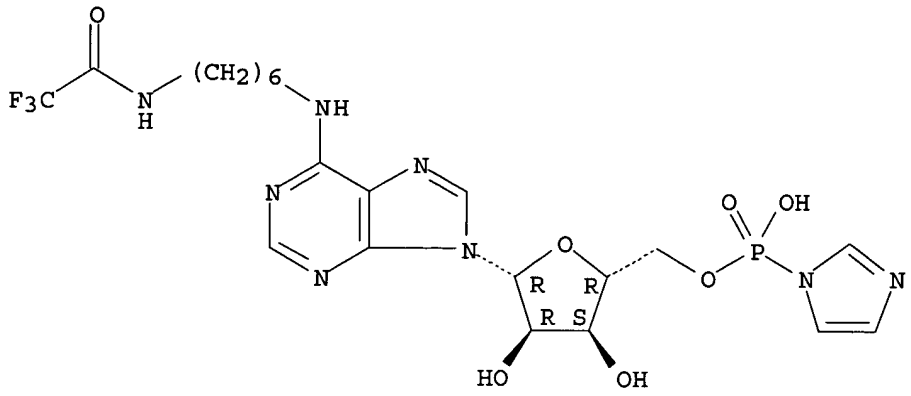


PAGE 2-A



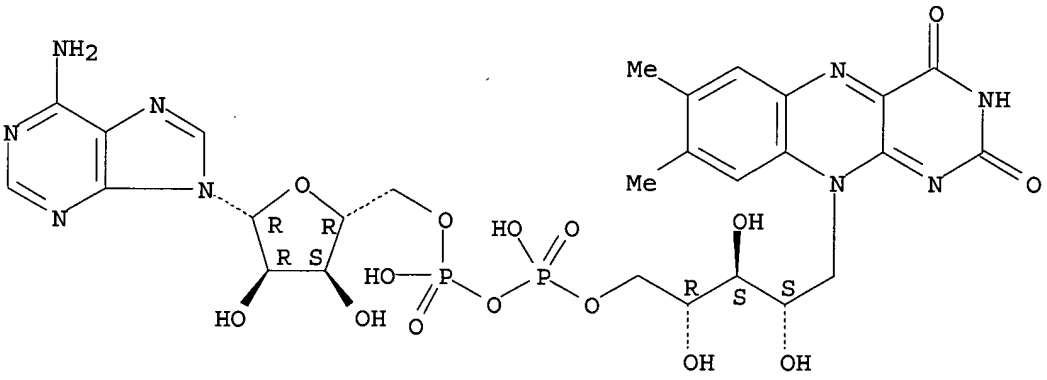
IT **73122-00-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with riboflavin monophosphate)
RN 73122-00-6 CAPLUS
CN Adenosine, N-[6-[(trifluoroacetyl)amino]hexyl]-, 5'-(hydrogen 1H-imidazol-1-ylphosphonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



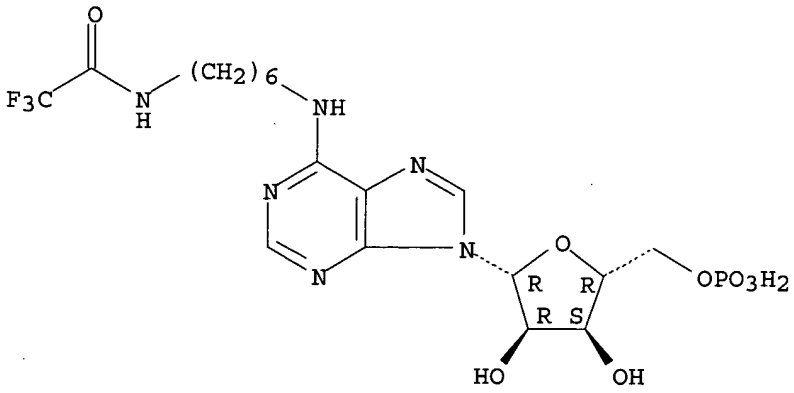
IT **146-14-5DP**, reaction products with theophylline
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for fluorescence immunoassay)
RN 146-14-5 CAPLUS
CN Riboflavin 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with adenosine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **66060-76-2**
RL: RCT (Reactant)
(reaction of, with carbonyl diamidazole)
RN 66060-76-2 CAPLUS
CN 5'-Adenylic acid, N-[6-[(trifluoroacetyl)amino]hexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

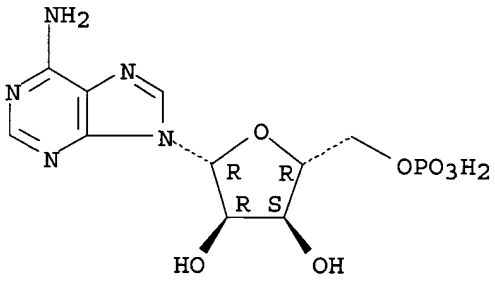


L6 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1981:116179 CAPLUS
DN 94:116179
TI Spin-labeling study of intermolecular interactions and self-organization of nucleotide systems into ordered structures
AU Petrov, A. I.; Sukhorukov, B. I.
CS Inst. Biol. Phys., Moscow, USSR
SO Stud. Biophys. (1980), 80(2), 79-84
CODEN: STBIBN; ISSN: 0081-6337
DT Journal
LA English
AB With the use of the spin **label** N-(2,2,5,5-tetramethyl-3-carbonylpyrroline-1-oxyl)**imidazole** it was demonstrated that: (1) the self assocn. of adenine nucleotides (AMP, ADP, or ATP) depended on protonation state and not on phosphate chain length; (2) protonation-induced changes in poly(A), poly(U), or poly(C) occurred in an alternating fashion, i.e., if the initial rigid structure of the polynucleotide changed to another rigid structure, there was an intermediate protonation degree at which the polynucleotide existed in a flexible conformation; and (3) complex formation between adenosine, uridine, or cytidine and poly(U) occurred with a free energy of H-bonding of 1.77, 0.86, and 0.51 kcal/mol, resp.
IT **24937-83-5**
RL: BIOL (Biological study)
(mononucleotide interaction with)
RN 24937-83-5 CAPLUS
CN 5'-Adenylic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

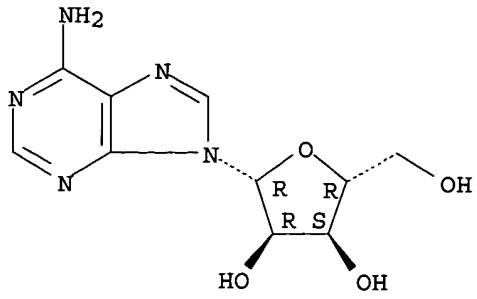
CRN 61-19-8
CMF C10 H14 N5 O7 P

Absolute stereochemistry.



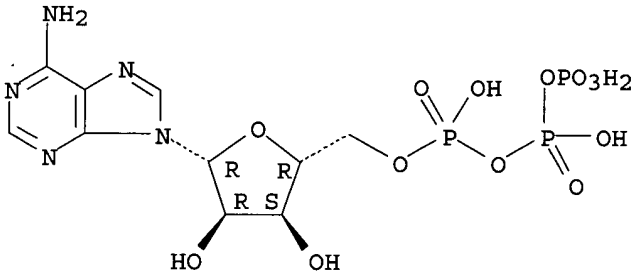
IT **58-61-7**, biological studies
RL: BIOL (Biological study)
(poly(U) binding of)
RN 58-61-7 CAPLUS
CN Adenosine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



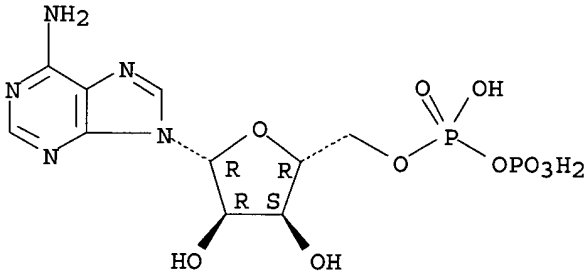
IT **56-65-5**, biological studies **58-64-0**, biological studies
61-19-8, biological studies
RL: PRP (Properties)
(self assocn. of, phosphate and protonation effect on)
RN 56-65-5 CAPLUS
CN Adenosine 5'-(tetrahydrogen triphosphate) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



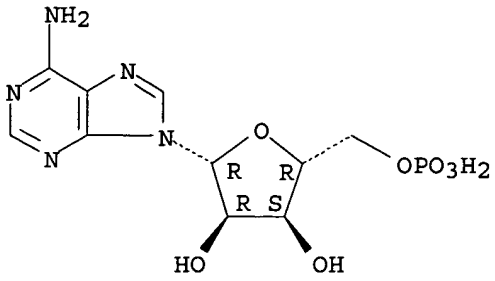
RN 58-64-0 CAPLUS
CN Adenosine 5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 61-19-8 CAPLUS
CN 5'-Adenylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

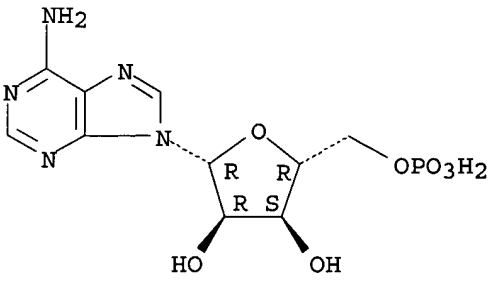


L6 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1981:11745 CAPLUS
DN 94:11745
TI Spin-labeled polyribonucleotides
AU Petrov, A. I.; Sukhorukov, B. I.
CS Inst. Biol. Phys., Pushchino, 142292, USSR
SO Nucleic Acids Res. (1980), 8(18), 4221-34
CODEN: NARHAD; ISSN: 0305-1048
DT Journal
LA English
AB Poly(U), poly(C), and poly(A) were spin-labeled with N-(2,2,5,5-tetramethyl-3-carbonylpyrroline-1-oxyl)**imidazole**. This spin **label** interacts selectively with the 2'-OH of ribose groups of polynucleotides and does not modify the nucleic acid bases. The extent of spin-labeling is not dependent on the nature of the base and is entirely detd. by rigidity of the secondary structure of the polynucleotide. The extent of modification for poly(U), poly(C), and poly(A) was 4.2, 1.7, and 1.5%, resp., the secondary structure of the polynucleotides being practically unchanged. Some physicochem. properties of the spin-labeled polynucleotides were investigated by ESR spectroscopy. Rotational correlation times of the spin **label** and activation energy of its motion were calcd.
IT **24937-83-5**
RL: BIOL (Biological study)
(spin labeling of ribose of, ESR in relation to)
RN 24937-83-5 CAPLUS
CN 5'-Adenylic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 61-19-8
CMF C10 H14 N5 O7 P

Absolute stereochemistry.



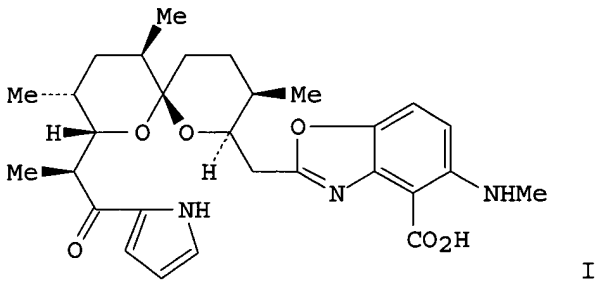
L6 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1979:400478 CAPLUS
DN 91:478

TI In vitro effects of ionophore A23187 on skeletal collagen and noncollagen protein synthesis

AU Dietrich, John W.; Paddock, David N.
CS Sch. Med., Univ. Illinois, Peoria, IL, 61605, USA

SO Endocrinology (Baltimore) (1979), 104(2), 493-9
CODEN: ENDOAO; ISSN: 0013-7227
DT Journal
LA English

GI



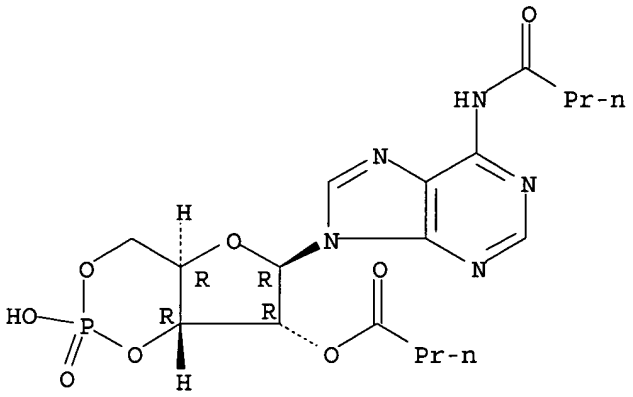
I

AB Effects of ionophore A 23187 (I) [52665-69-7] on skeletal collagen formation were investigated in vitro. Collagen synthesis was quantitated in fetal rat calvaria by measuring proline-3H incorporation into collagenase-digestible (CDP) and noncollagen protein (NCP) using purified bacterial collagenase. I (0.03-1.0 .mu.g/mL) inhibited incorporation of **label** into CDP and NCP after 24 h of culture, with a greater effect on CDP. The response was not assocd. with altered amino acid uptake, precursor pool size, or degrdn. of newly labeled protein. Submaximal concns. of I and parathyroid hormone [9002-64-6] or dibutyryl cAMP [**362-74-3**] decreased CDP formation to a greater extent than treatment with the agents alone. **Imidazole** [288-32-4] although ineffective by itself, enhanced the effect of I. Alteration of medium Ca did not affect the response to I. The inhibitory effect of I was partially reversed by 24 h and completely reversed by 48 h of control treatment subsequent to an initial 24-h incubation with I. Indomethacin had no effect on CDP or NCP formation, either in the presence or absence of I. I did not alter the uptake of thymidine-3H or uridine-3H into acid-extractable pools but decreased incorporation of **label** into DNA and RNA, resp. Histol. examn. showed no difference between control and I treatment after 24 h. Apparently, I decreases bone collagen and noncollagen protein synthesis, possibly through a Ca-mediated effect. The mechanism of the inhibitory effect on DNA and RNA labeling is unknown, although it may be related to Ca. Ca may be involved in the actions of parathyroid hormone and dibutyryl cAMP on skeletal collagen synthesis.

IT **362-74-3**
RL: BIOL (Biological study)
(collagen and protein formation response to, in bone)

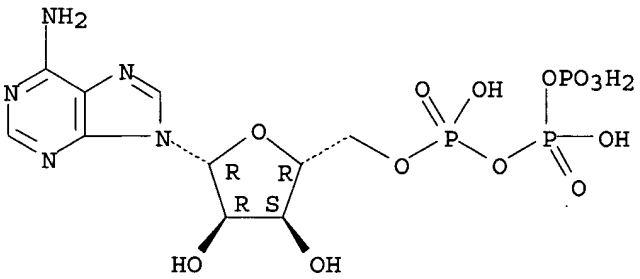
RN 362-74-3 CAPLUS
CN Adenosine, N-(1-oxobutyl)-, cyclic 3',5'-(hydrogen phosphate) 2'-butanoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1979:134457 CAPLUS
DN 90:134457
TI Cobalt(III) labeling of methionyl-tRNA synthetase from Escherichia coli
AU Kalogerakos, Theodore; Blanquet, Sylvain; Waller, Jean Pierre
CS Lab. Biochim., Ec. Polytech., Palaiseau, Fr.
SO Eur. J. Biochem. (1979), 93(2), 339-43
CODEN: EJBCAI; ISSN: 0014-2956
DT Journal
LA English
AB Native and trypsin-modified methionyl-tRNA synthetases from E. coli were inactivated by incubation in the presence of Co(III) complexes of ATP, stabilized either by **imidazole** or phenanthroline, or by oxidn. in situ to Co(III) of the substrate, ATP-Co(II). The inactivation proceeded by specific labeling of the catalytic ATP-Mg(II) site of the synthetases. The enzymes were completely inactivated by the incorporation of 1 Co and 1 ATP/active site. The inactivated enzymes were stored for a long period without significant reactivation or removal of the Co **label**. In the presence of dithiothreitol or 2-mercaptoethanol, the labeled enzymes recovered full activity with concomittant release of the bound **label** mols.
IT **56-65-5D**, cobalt(III) complexes
RL: BIOL (Biological study)
(methionyl-tRNA synthetase inactivation by)
RN 56-65-5 CAPLUS
CN Adenosine 5'-(tetrahydrogen triphosphate) (8CI, 9CI) (CA INDEX NAME)

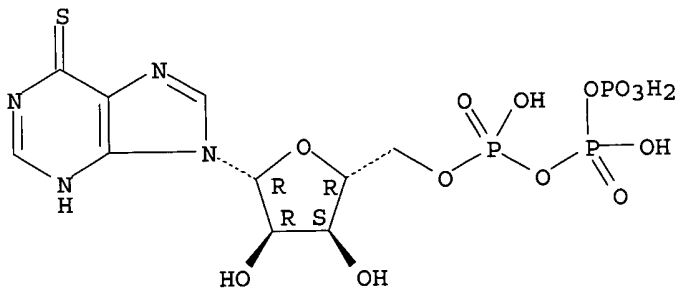
Absolute stereochemistry.



L6 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1973:132883 CAPLUS
DN 78:132883
TI Relaxation spectra of aspartate transcarbamylase. Interaction of the native enzyme with an adenosine 5'-triphosphate analog

AU Wu, Cheng-Wen; Hammes, Gordon G.
CS Dep. Chem., Cornell Univ., Ithaca, N. Y., USA
SO Biochemistry (1973), 12(7), 1400-8
CODEN: BICHAW
DT Journal
LA English
AB The interaction of aspartate transcarbamylase from Escherichia coli with the activator 6-mercapto-9-.beta.-D-ribofuranosylpurine 5'-triphosphate (sRTP) was studied at pH 7.0, 25.degree., in 0.15.MU. KOaac-0.04.MU. **imidazole** acetate, using difference spectroscopy and the temp.-jump method. The sRTP does not serve as an affinity **label** for the regulatory or catalytic sites, but a difference spectrum is obsd. when sRTP binds to the catalytic subunit, the regulatory subunit and the native enzyme. A spectral titration of the catalytic subunit indicates 3 binding sites are present per catalytic subunit mol. with a dissociation constant of 2.5 .times. 10-4m. With native enzyme, 2 relaxation processes are seen. The faster one has a time constant similar to that found with the isolated catalytic subunit and disappears in the presence of 2m.MU. carbamyl phosphate so that it probably reflects the interaction of sRTP catalytic site. The reciprocal relaxation time for the slower process increases and approaches a constant value as the sRTP concn. is raised. This behavior is obsd. in the presence or absence of 2m.MU. carbamyl phosphate and 10m.MU. succinate, although the limiting value reached varies. The simplest mechanism consistent with the data is a rapid combination of sRTP and enzyme followed by a rate-limiting conformational change, a mechanism similar to that proposed for the interaction of CTP with the native enzyme. When both sRTP and 5-bromocytidine 5-triphosphate are added to the enzyme, only a single relaxation process is obsd., suggesting that the same 2 conformational states occur with both activator and inhibitor complexes. A multiconformational model involving both concerted and sequential conformation transitions is proposed for the overall regulatory mechanism.
IT **27652-34-2**
RL: PROC (Process)
(aspartate transcarbamylase binding of)
RN 27652-34-2 CAPLUS
CN Inosine 5'-(tetrahydrogen triphosphate), 6-thio- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1966:13527 CAPLUS
DN 64:13527
OREF 64:2512h,2513a-b
TI Evidence for conformation changes in actin on contraction
AU Szent-Gyorgyi, Andrew G.
CS Dartmouth Med. School, Hanover, NH
SO Muscle, Proc. Symp., Edmonton, Alberta, Can. (1965), 1964, 141-51
DT Journal
LA English

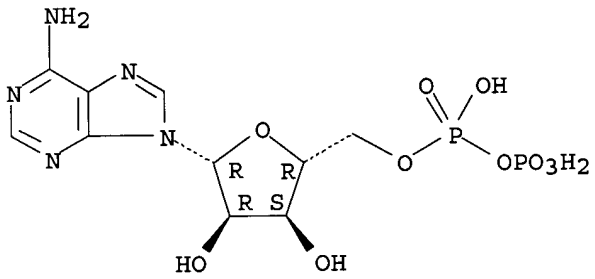
AB Actomyosin (I), prepd. from F actin (II) contg. ADP labeled with 32P, suspended in pH 7.0 **imidazole**-HCl buffer contg. NaCl and MgCl2, was mixed with ATP. Aliquots were removed at intervals, centrifuged, and supernatants assayed for radioactivity, inorg. phosphate, and protein. Up to 25% total **label** was released in 30 sec., accompanied by ATP hydrolysis and superpptn. of protein. A further 25% of **label** was released at a much slower rate. Release of **label** required ATP. No reabsorption of **label** after ATP exhaustion was noted. II labeled with ATP-14C was incubated with 100-fold excess of ATP or an ATP-phosphocreatine (III)-creatine kinase mixt. in NaCl concns. of 0.05, 0.1, and 0.15M for 30-60 min., centrifuged for 3 hrs. at 40,000 rpm., and radioactivity and protein detd. in the supernatant. About 20% nucleotides and 8-15% protein did not sediment. I prepd. from labeled II retained its sp. activity after repeated repptns. Labeled ADP introduced with II into I was protected from creatine kinase action. Release of nucleotide from I was not catalyzed by ADP or AMP. At 10.degree., as opposed to 23.degree., superpptn. of I and release of nucleotide was delayed 10 min. Addn. of III enhanced the temp.-dependent effect. Creatine release was 10 times faster at 23.degree. than at 10.degree.. Superpptn., rate of release of nucleotide, and ATPase activity were all accelerated by Mg++. The data suggest a conformation change at the myosin binding sites of II, occurring during superpptn., resulting in looser binding of nucleotide.

IT **58-64-0**, Adenosine pyrophosphate
(actin F release of, in contraction, conformation changes and)

RN 58-64-0 CAPLUS

CN Adenosine 5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2002 ACS

AN 1963:35225 CAPLUS

DN 58:35225

OREF 58:6055b-d

TI Nucleic acid synthesis in the thyroid

AU Hall, Reginald

CS Harvard Med. School, Boston, MA

SO Biochim. Biophys. Acta (1962), 61, 530-7

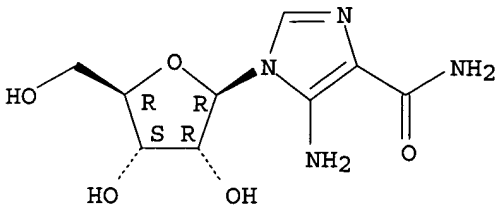
DT Journal

LA English

AB The incorporation of HC14O2H into the bases of ribonucleic acid (RNA) and deoxyribonucleic acid (DNA) in slices of sheep, pig, and calf thyroid was studied. For comparison with thyroid, RNA synthesis was measured in other calf and sheep tissues. Also, labeling of adenine, guanine, and hypoxanthine was detd. Significant RNA synthesis occurred in the slices. DNA formation was much less active. In calf thyroid, purine synthesis was very rapid, and 44% of the **label** was incorporated into the C-8 of RNA adenine, indicating that there was significant purine formation via the full de novo pathway. 5-Amino-4-**imidazole** carboxamide (I) stimulated purine formation, and I ribonucleoside was even more effective. Glucose alone stimulated purine synthesis slightly, but glucose plus I was as effective as I ribonucleoside.

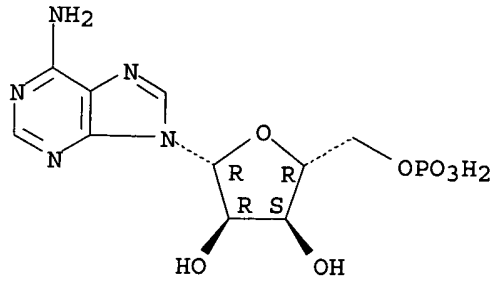
IT **2627-69-2**, **Imidazole**-4-carboxamide, 5-amino-1-.beta.-D-ribofuranosyl-
(in purine formation by thyroid, D-glucose and)
RN 2627-69-2 CAPLUS
CN 1H-Imidazole-4-carboxamide, 5-amino-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



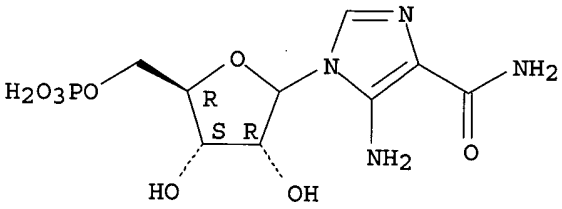
L6 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2002 ACS
AN 1962:68377 CAPLUS
DN 56:68377
OREF 56:13239g-i
TI Biosynthesis of the purines. XXVIII. Mechanism of action of adenylosuccinase
AU Miller, Richard W.; Buchanan, John M.
CS Massachusetts Inst. of Technol., Cambridge
SO J. Biol. Chem. (1962), 237, 491-6
DT Journal
LA Unavailable
AB The mechanism of addn. of 5-amino-1-ribosyl-4-imidazolecarboxamide 5'-phosphate and adenosine 5'-phosphate to the double bond of fumaric acid was studied through reversal of the reactions catalyzed by adenylosuccinase in a tritiated medium. The distribution of T in the aspartate moiety of the resulting intermediate was analyzed with bacterial aspartase. Since the aspartate moiety shows the same specific distribution of T **label** as the product of bacterial aspartase, it must be concluded that the stereospecificity of the cleavage reaction is identical to that of the enzymic removal of NH3 from L-aspartate. Since the latter reaction and the hydration of fumarate by fumarase occur by a trans mechanism, this same general type of mechanism can now be applied to the reactions catalyzed by adenylosuccinase. The complete stereospecificity of the reaction is detd. by (a) the trans structure of fumarate, (b) the L-configuration of the product, and (c) the trans addn. of elements across the double bond of fumarate. The lack of noticeable H isotope effect on the rate of the cleaving reaction requires that H be added or removed in a step distinct from the rate-limiting process. This conclusion, in turn, requires the participation of some intermediate or complex.
IT **61-19-8**, 5'-Adenylic acid **7322-81-8**, **Imidazole**-4-carboxamide, 5-amino-1-ribofuranosyl-, 5'-phosphate
(addn. to fumaric acid double bond by adenylosuccinic lyase)
RN 61-19-8 CAPLUS
CN 5'-Adenylic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 7322-81-8 CAPLUS
CN Imidazole-4-carboxamide, 5-amino-1-ribofuranosyl-, 5'-(dihydrogenphosphate) (8CI) (CA INDEX NAME)

Relative stereochemistry.



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